

Serial No.: 10/766,317  
Filing Date: January 27, 2004

**REMARKS**

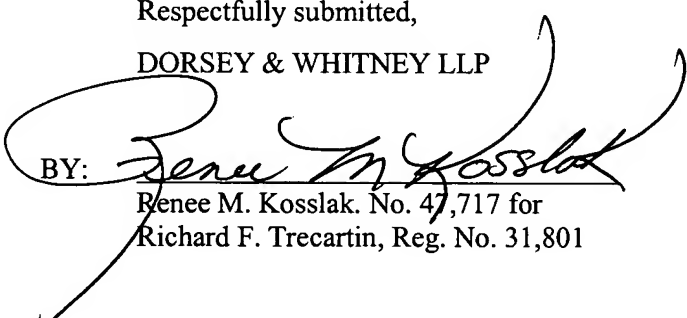
Entry of this amendment is respectfully requested. The amendments are made in adherence with 37 C.F.R. § 1.821-1.825. This amendment is accompanied by a floppy disc containing the above named sequences, SEQUENCE ID NUMBERS 1-24, in computer readable form, and a paper copy of the sequence information.

The information contained in the computer readable disc is identical to that of the paper copy in adherence with 37 C.F.R. § 1.821(f). This amendment contains no new matter in adherence with 37 C.F.R. § 1.821(g). Applicant submits that this amendment, the accompanying computer readable sequence listing, and the paper copy thereof serve to place this application in a condition of adherence to the rules 37 C.F.R. § 1.821-1.825.

In addition, the present amendment corrects margins and corrects typographical errors, including erasures, alterations, overwritings, interlineations, and copy marks in Figures 1A-D, 2A-J, 3A-N, 4, 5, 6, and 7 in compliance to 37 C.F.R. §§1.84 and 1.121. Replacement Sheets 1/28-28/28 incorporate corrections, and Annotated Sheets Showing Changes marked in red are attached for the Examiner's convenience. Applicants submit that this amendment is not new matter and request its entry. Please direct any calls in connection with this application to the undersigned at (415) 781-1989.

Respectfully submitted,  
DORSEY & WHITNEY LLP

Dated: 8/11/04  
Customer Number: 32940  
Dorsey & Whitney LLP  
Intellectual Property Department  
Four Embarcadero Center, Suite 3400  
San Francisco, CA 94111-4187  
Telephone: (415) 781-1989  
Facsimile: (415) 398-3249

BY:   
Renee M. Kosslok. No. 47,717 for  
Richard F. Trecartin, Reg. No. 31,801

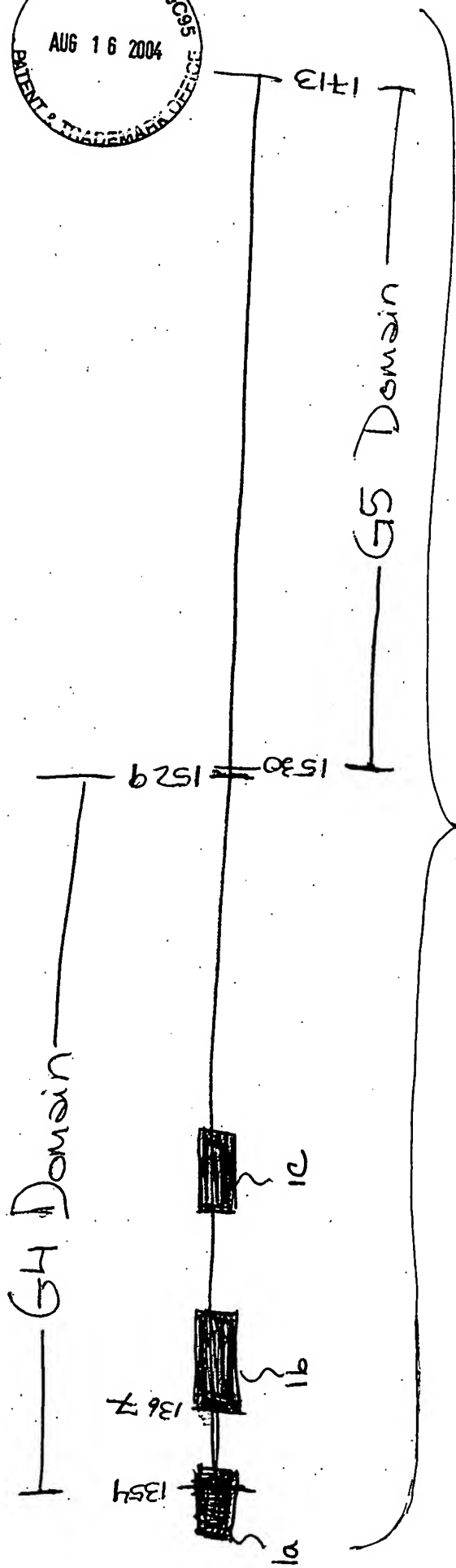


FIG. 1A

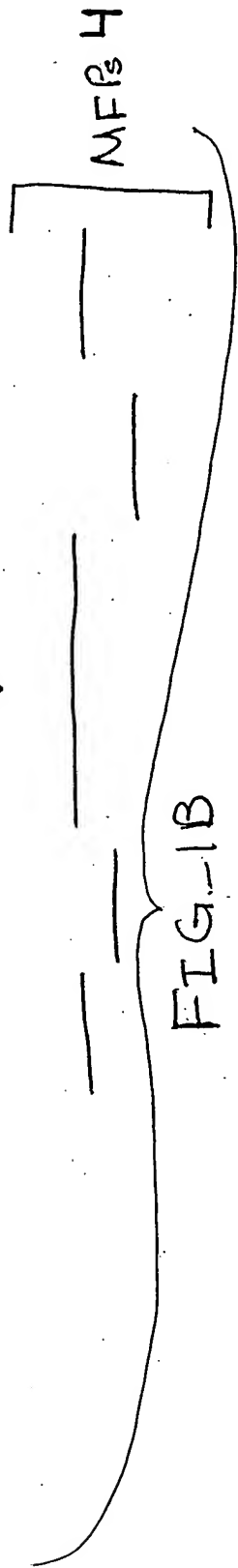
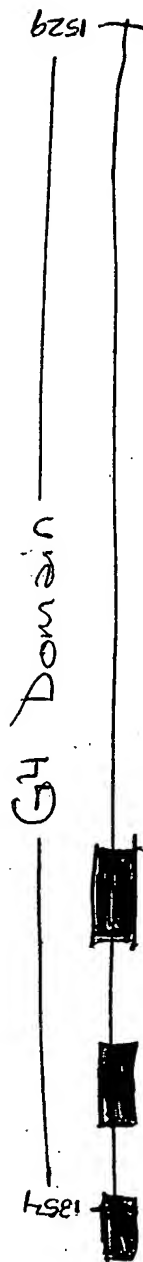


FIG. 1B

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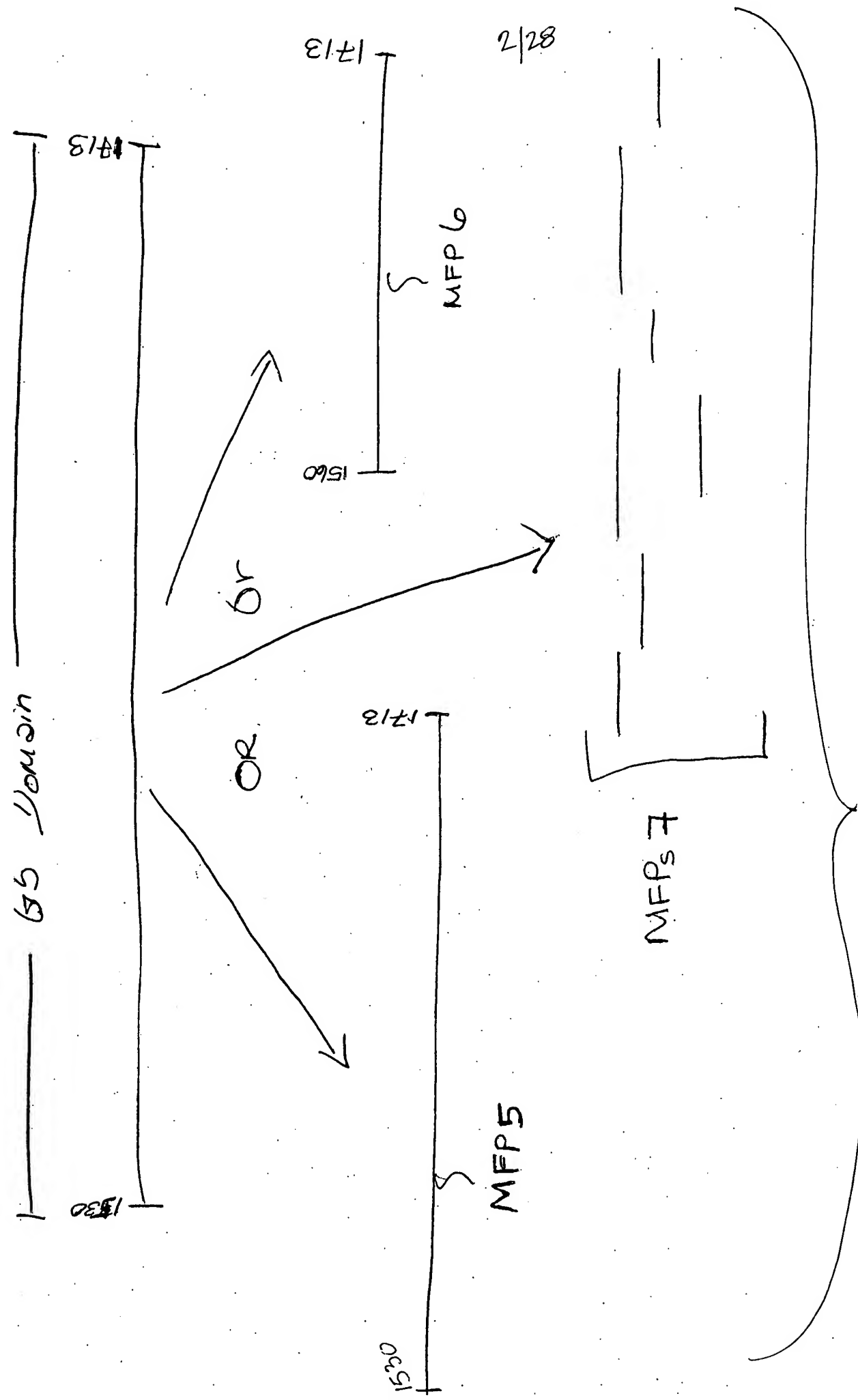


FIG. 1C

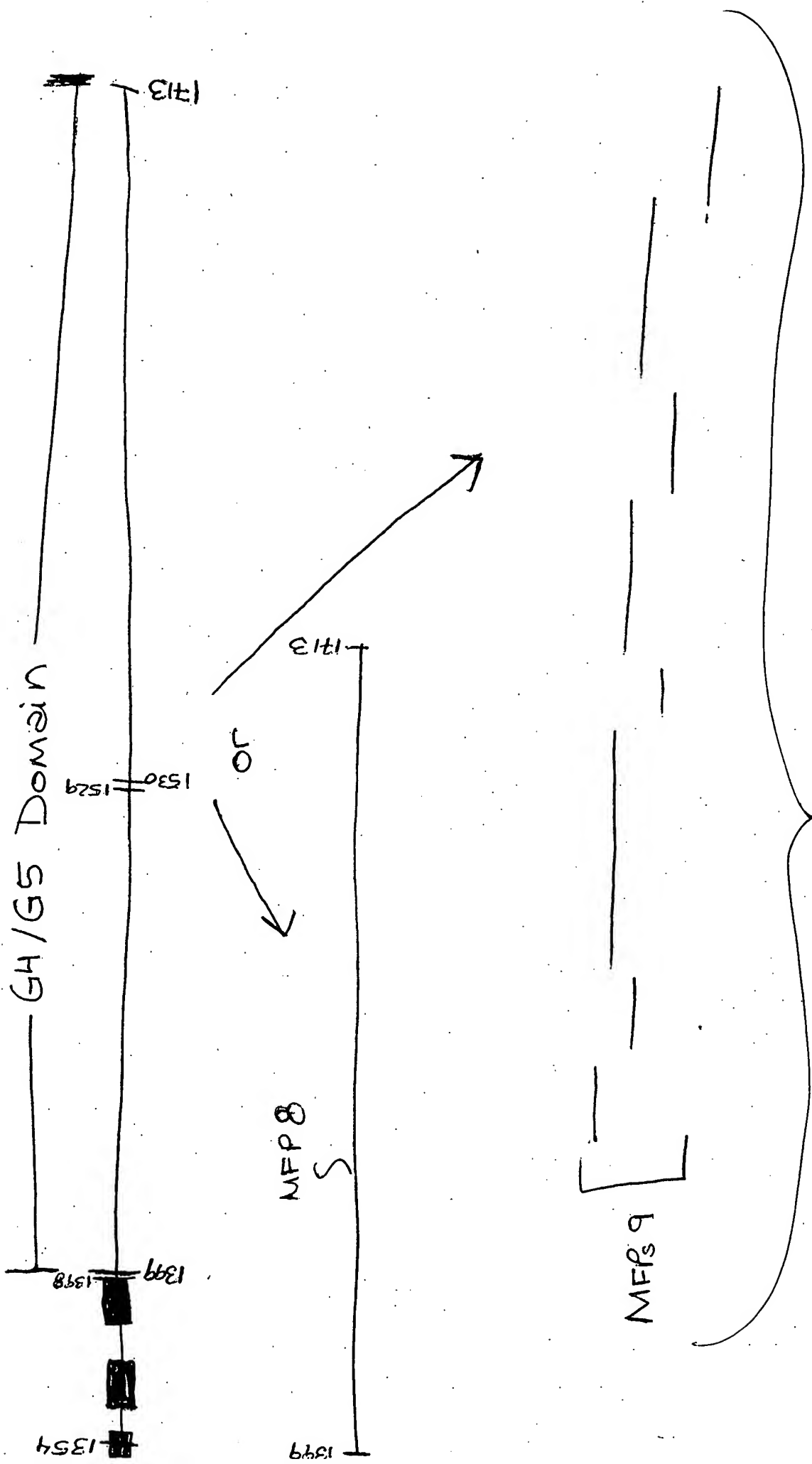


FIG. 1D

Figure 1D is now on same page as Figure 1C.

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~~FIG. 2A~~

1 atgggatggc tgtggatcct tggggcagcc ctggggcagt gtctgggcta  
cagttcacag  
61 cagcaaaggg tgccatttct tcagcctccc ggtcaaagtc aactgcaagc  
gagttatgtg  
121 gagtttagac ccagccaggg ttgtagccct ggatactatc gggatcataa  
aggcttgtat  
181 accggacggt gtgttccctg caattgcaac ggacattcaa atcaatgcca  
ggatggctca  
241 ggcatatgtg ttaactgtca gcacaacacc gcgggagagc actgtgaacg  
ctgccaggag  
301 ggctactatg gcaacgccgt ccacggatcc tgcagggcct gcccatgtcc  
tcacactaac  
361 agctttgcca ctggctgtgt ggtgaatggg ggagacgtgc ggtgctcctg  
caaagctggg  
421 tacacaggaa cacagtgtga aaggtgtgca ccgggatatt tcgggaatcc  
ccagaaattc  
481 ggaggtagct gccaaccatg cagttgtaac agcaatggcc agctgggcag  
ctgtcatccc  
541 ctgactggag actgcataaa ccaagaaccc aaagatagca gccctgcaga  
agaatgtgat  
601 gattgcgaca gctgtgtgat gaccctcctg aacgacctgg ccaccatggg  
cgagcagctc  
661 cgcttggta agtctcagct gcagggcctg agtgccagcg cagggcttct  
ggagcagatg  
721 aggcacatgg agaccaggc caaggacctg aggaatcagt tgctcaacta  
ccgttctgcc  
781 atttcaaac atggatcaaa aatagaaggc ctggaaagag aactgactga  
tttgaatcaa  
841 gaatttgaga ctttgcaaga aaaggctcaa gtaaattcca gaaaagcaca  
aacattaaac  
901 aacaatgtta atcgggcaac acaaagcgca aaagaactgg atgtgaagat  
taaaaatgtc  
961 atccggaatg tgcacattct tttaaagcag atctctggga cagatggaga  
gggaaacaac  
1021 gtgccttcag gtgacttttc cagagagtgg gctgaagccc agcgcagtat  
gagggaaactg  
1081 cggaacagga actttggaaa gcacctcaga gaagcagaag ctgataaaaag  
ggagtcgcag  
1141 ctcttgctga accggataag gacctggcag aaaaccacc agggggagaa  
caatgggctt  
1201 gctaacagta tccgggattc tttaaatgaa tacgaagcca aactcagtga  
ccttcgtgct  
1261 cggctgcagg aggcagctgc ccaagccaag caggcaaatt gcttgaacca  
agaaaacgag

FIG. 2A-1

FIG. 2A (CONT)

1321 agagcttttg gagccattca gagacaagtg aaagaaataa attccctgca  
gagtgatttc  
1381 accaagtatc taaccactgc agactcatct ttgttgcaaa ccaacattgc  
gctgcagctg  
1441 atggagaaaa gccagaagga atatgaaaaa ttagctgcca gtttaaata  
agcaagacaa  
1501 gaactaagtg acaaagtaag agaactttcc agatctgctg gcaaaacatc  
ccttggtggag  
1561 gaggcagaaa agcacgcgcg gtccttacia gagctggcaa agcagctgga  
agagatcaag  
1621 agaaacgcca gcggggatga gctggtgcgc tgtgctgtgg atgccgccac  
cgctacgag  
1681 aacatcctca atgccatcaa agcggccgag gacgcagcca acagggtgc  
cagtgcattc  
1741 gaatctgccc tccagacagt gataaaggaa gatctgcaa gaaaagctaa  
aacctgagt  
1801 tccaacagtg ataaactgtt aaatgaagcc aagatgacac aaaagaagct  
aaagcaagaa  
1861 gtcagtccag ctctcaacia cctacagcaa accctgaata ttgtgacagt  
tcagaaagaa  
1921 gtgatagaca ccaatctcac aactctccga gatggtcttc atgggataca  
gagaggtgat  
1981 attgatgcta tgatcagtag tgcaaagagc atggtcagaa aggccaacga  
catcacagat  
2041 gaggttctgg atgggctcaa ccccatccag acagatgtgg aaagaattaa  
ggacacctat  
2101 gggaggacac agaacgaaga cttcaaaaag gctctgactg atgcagataa  
ctcgggtgaat  
2161 aagttaacca acaaactacc tgatctttgg cgcaagattg aaagtatcaa  
ccaacagctg  
2221 ttgcccttgg gaaacatctc tgacaacatg gacagaatac gagaactaat  
tcagcaggcc  
2281 agagatgctg ccagtaaggt tgctgtcccc atgaggttca atggtaaatc  
tggagtcgaa  
2341 gtccgactgc caaatgacct ggaagatttg aaaggatata catctctgtc  
cttgtttctc  
2401 caaaggccca actcaagaga aaatgggggt actgagaata tgtttgtgat  
gtaccttgga  
2461 aataaagatg cctcccggga ctacatcggc atggcagttg tggatggcca  
gctcacctgt  
2521 gtctacaacc tgggggaccg tgaggctgaa ctccaagtgg accagatctt  
gaccaagagt  
2581 gagactaagg aggcagttat ggatcgggtg aaatttcaga gaatttatca  
gtttgcaagg

FIG. 2A (CONT)

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Fig. 2A2

2641 cttaattaca ccaaaggagc cacatccagt aaaccagaaa caccgaggat  
ctatgacatg  
2701 gatggtagaa atagcaatac actccttaat ttggatcctg aaaatgttgt  
attttatgtt  
2761 ggaggttacc cacctgattt taaacttccc agtcgactaa gtttccctcc  
atacaaagg  
2821 tgtattgaat tagatgacct caatgaaaat gttctgagct tgtacaactt  
caaaaaaaca  
2881 ttcaatctca acacaactga agtggagcct tgtagaagga ggaaggaaga  
gtcagacaaa

FIG. 2A-1

2941 aattatthttg aaggtacggg ctatgctcga gttccaactc aaccacatgc  
tcccatccca  
3001 acctttggac agacaattca gaccaccgtg gatagaggct tgctgttctt  
tgcagaaaac  
3061 ggggatcgtc tcatatctct aaatatagaa gatggcaagc tcatggtgag  
atacaaactg  
3121 aattcagagc taccaaaaga gagaggagt ggagacgcca taaacaacgg  
cagagaccat  
3181 tcgattcaga tcaaaattgg aaaactccaa aagcgtatgt ggataaatgt  
ggacgttcaa  
3241 aacactataa ttgatggtga agtatttgat ttcagcacat attatctggg  
aggaattcca  
3301 attgcaatca gggaaagatt taacatttct acgcctgctt tccgaggctg  
catgaaaaat  
3361 ttgaagaaaa ccagtgggtg cgttagattg aatgatactg tgggagtaac  
caaaaagtgc  
3421 tcggaagact ggaagcttgt gcgatctgcc tcattctcca gaggaggaca  
attgagtttc  
3481 actgatttgg gcttaccacc tactgaccac ctccaggcct catttggatt  
tcagacctt  
3541 caaccagtg gcatattatt agatcatcag acatggacaa ggaacctgca  
ggtcactctg  
3601 gaagatgggt acattgaatt gagcaccagc gatagcggcg gcccaatttt  
taaattctca  
3661 cagacgtata tggatggttt actgcattat gtatctgtaa taagcgacaa  
ctctggacta  
3721 cggcttctca tcgatgacca gcttctgaga aatagcaaaa ggctaaaaca  
catttcaagt  
3781 tcccggcagt ctctgcgtct gggcgggagc aattttgagg gttgtattag  
caatgttttt  
3841 gtccagaggt tatcactgag tcctgaagtc ctagatttga ccagtaactc  
totcaagaga  
3901 gatgtgtccc tgggaggctg cagtttaaac aaaccacctt ttctaattgt  
gcttaaagg

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FIG. 2A2

FIG. 2A (CONT)

3961 tctaccaggt ttaacaagac caagactttt cgtatcaacc agctgttgca  
 ggacacacca  
 4021 gtggcctccc caaggagcgt gaaggtgtgg caagatgctt gctcaccact  
 tcccaagacc  
 4081 caggccaatc atggagccct ccagtttggg gacattccca ccagccactt  
 gctattcaag  
 4141 cttcctcagg agctgctgaa acccaggtca cagtttgctg tggacatgca  
 gacaacatcc  
 4201 tccagaggac tgggtgtttca cacgggcact aagaactcct ttatggctct  
 ttatctttca  
 4261 aaaggacgtc tggctctttgc actggggaca gatgggaaaa aattgaggat  
 caaaagcaag  
 4321 gagaaatgca atgatgggaa atggcacacg gtgggtgtttg gccatgatgg  
 ggaaaagggg  
 4381 cgcttggttg tggatggact gagggcccgg gaggggaagtt tgccctggaaa  
 ctccaccatc  
 4441 agcatcagag cgccagttta cctgggatca cctccatcag ggaaacaaaa  
 gagcctcccc  
 4501 acaaacagct ttgtgggatg cctgaagaac tttcagctgg attcaaaacc  
 cttgtatacc  
 4561 ccttcttcaa gcttcggggg gtcttcctgc ttgggtggtc ctttgagaa  
 aggcatttat  
 4621 ttctctgaag aaggaggtca tgtcgtcttg gctcactctg tattgttggg  
 gccagaattt  
 4681 aagcttgttt tcagcatccg cccaagaagt ctactggga tcctaataca  
 catcggaagt  
 4741 cagcccggga agcacttatg tgtttacctg gaggcaggaa aggtcacggc  
 ctctatggac  
 4801 agtggggcag gtgggacctc aacgtcggtc acaccaaage agtctctgtg  
 tgatggacag  
 4861 tggcactcgg tggcagtcac cataaaacaa cacatcctgc acctggaact  
 ggacacagac  
 4921 agtagctaca cagctggaca gatccccttc ccacctgcca gcaactcaaga  
 gccactacac  
 4981 cttggagggtg ctccagccaa tttgacgaca ctgaggatcc ctgtgtggaa  
 atcattcttt  
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 tatttcacag  
 5161 caaggaaatt caccttcaaa agcactgatt acccaatgca cctccctccc  
 cagctcgaga  
 5221 tcattcttca attaggacac aaaccagaca ggtttaatag cgaatcta  
 tttgaattct

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 FIG. 2A-2



~~FIG. 2A (CONT)~~

5281 gaccatggat acccatcact ttggcattca gtgctacatg tgtattttat  
ataaaaaatcc  
5341 catttcttga agataaaaaa attgttattc aaattgttat gcacagaatg  
tttttggttaa  
5401 tattaatttc cactaaaaaa ttaaattgtct ttt

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FIG.-2A-2

FIG.-2A-2

~~FIG. 2B~~

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MGWLWIFGAALGQCLGYSSQQQRVPFLQPPGQSQLQASYVEFRP

SQGCSPGYRDKGLYTGRVCPCNCNGHSNQCQDGGSGICVNCQHNTAGEHCERCQEGY  
YGNAVHGSCRACPCPHTNSFATGCVVNGDVRCCKAGYTGTQCERCAPGYFGNPQKF  
GGSCQPCSCNSNGQLGSCHPLTGDCINQEPKDSSPAEECDSCVM TLLNDLATMGE  
QLRLVKSQLOGLSASAGLLEQMRHMETQAKDLRNQLLNYS AISNHGSKIEGLERELT  
DLNQEFETLQEKAQVNSRKAQTLNNNVNRATQSAKELDVKIKNVIRNVHILLKQISGT  
DGEENNVPSGDFSREWAEAQRMMRELRNRNFGKHLREAEADKRESQ LLLNRIRTWQKT  
HQGENNGLANSIRDSLNEYEAKLSDLRLRLQEAAAQAKQANGLNQENERALGAIQRQV  
KEINSLQSDFTKYLTADSSLLQTNIALQLMEKSQKEYEKLAA SLNEARQELSDKVRE  
LSRSAGKTSLVEEAEKHARSLQELAKQLEEIKRNASGDELVRCAVDAATAYENILNAI  
KAAEDAANRAASASESALQTVIKEDLPRKAKTLSSNSDKLLNEAKMTQKKLKQEVSPA  
LNNLQQTLNIVTVQKEVIDTNLTTLRDGLHGIQRGDIDAMISSAKSMVRKANDITDEV  
LDGLNPIQTDVERIKDTYGRTQNEDFKKALTDADNSVNKL TNKLPDLWRKIESINQQL  
LPLGNISDNMDRIRELIQQARDAASKVAVPMRFNGKSGVEVRLPNDLEDLKGYTSLSL  
FLQRPNSRENGGTENMFV MYLGNKDASRDYIGMAVVDGQLTCVYNLGDREAELQVDQI  
LTKSETKEAVMDRVKFQRIYQFARLNYTKGATSSKPETPGVYDMDGRNSNTLLNLDPE  
NVVFYVGGYPPDFKLPSRLSFPPYKGCIELDDL NENVLSLYNFKKTFNLNTTEVEPCR  
RRKEESDKNYFEGTGYARVPTQPHAPIPTFGQTIQTTVDRGLLFFAENGDRFISLNIE  
DGKLMVRYKLNSELPKERGVGDAINNGRDHSIQIKIGKLQKRMWINVDVQNTIIDGEV

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~~FIG. 2B~~ (CONT)

FDFSTYYLGGIPIAIRERFNISTPAFRGCMKNLKKTSQVVRNLNDTVGVTKKCSWDWL  
 VRSASFSRGGQLSFTDLGLPPTDHLQASFGFQTFQPSGILLDHQWTRNLQVTLEDGY  
 IELSTSDSGGPIFKSPQTYMDGLLHYVSVISDNSGLRLLIDDQLLRNSKRLKHISSSR  
 QSLRLGGSNFEGCISNVFVQRLSLSPEVLDLTSNSLKRQVSLGGCSLNKPPFLMLLLKG  
 STRFNKTKTFRINQLLQDTPVASPRSVKQWQDACSPKPTQANHGALQFGDIPTSHLL  
 FKLPQELLKPRSQFAVDMQTTSSRGLVFHTGTKNSEFMALYLSKGRVLFALGTDGKKLR  
 IKSKEKCNDGKWHTVVFQHDGEGKRLVVDGLRAREGSLPGNSTISIRAPVYLGSPPSG  
 KPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFGVSSCLGGPLEKGIYFSEEGGHVVLAH  
 SVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHLVCVYLEAGKVTASMDSGAGGTSTSV  
 TPKQSLCDGQWHSVAVTIKQHILHLELDTSSYTAGQIPFPASTQEPLHLGGAPANL  
 TTLRIPVWKSFFGCLRNHVNHI PVPVTEALEVQGPVSLNGCPDQ

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 FIG. 2B

FIG. 2B

~~FIG. 2C~~

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1 gcaggtccgg gaggcgcagg cggagagcgg cgggtgcccc  
 gagccccctct gcggacggct  
 61 caggcgggag gaccccgccg ggctggatgg cggcggccgc gcggcctcgg  
 ggtcgggcac  
 121 tggggccagt actgccgccg acgccgtgc tcctgctggt actgcgggtg  
 ctgccagcct  
 181 gcggggcgac cgctcgggat cccggggccg cggccggggt cagccttcac  
 ccgacttact  
 241 tcaacctggc cgaggcggcg aggatttggg ccaccgccac ctgcggggag  
 aggggacccg  
 301 gcgaggggag gccccagccc gagctctact gcaagttggt cgggggcccc  
 accgccccag  
 361 gcagcggcca caccatccag ggccagttct gtgactattg caattctgaa  
 gacccagga  
 421 aagcacatcc tgtcaccaat gccatcgatg gatctgaacg ttggtggcaa  
 agcctcccc  
 481 tgtcctcagg cacacagtac aacagagtca acctcacctt ggatctgggg  
 cagctcttcc

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 FIG. 2C-1

FIG. 2C (CONT)

541 atgtggccta tattttaata aaatttgcaa attctcctcg ccctgatctt  
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 601 aaagatctgt agactttgga agcacctact caccatggca atattttgct  
 cattctaaag  
 661 tagactgttt aaaagaattt gggcgggagg caaatatggc tgtcaccg  
 gatgatgatg  
 721 tactttgtgt tactgaatat tcccgtattg tacctttgga aaatggtgag  
 gttgtggtgt  
 781 ccttgataaa cggtcgtcca ggtgcaaaaa attttacttt ctctcacacc  
 ctgagggagt  
 841 ttaccaaggc aacaaacatc cgcttgcggt ttcttagaac caatacgctt  
 ctgagacacc  
 901 tcatctccaa agcccagcga gatccaactg tcaactcggcg gtattattac  
 agcataaagg  
 961 acatcagcat tgggtggcag tgtgtttgca atggccatgc tgaagtgtgc  
 aatataaaca  
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 acgtgtgatc  
 1081 gctgctgcac agggatcaat cagaggcgct ggcggcccgc cgcttgggag  
 cagagccacg  
 1141 agtgtgaagc atgcaactgc cacggccatg ccagcaactg ttactatgat  
 ccagatgttg  
 1201 agcggcagca ggcaagcttg aatacccagg gcatctatgc tgggtggagg  
 gtctgcatta  
 1261 actgtcagca caacacagct ggagtaaact gtgaacagtg tgctaagggc  
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 gaccctgagc  
 1381 atgcggatgg ctgtgaacag ggttcaggcc gctgtcactg caagccaaat  
 ttccacggag  
 1441 acaactgtga gaagtgtgca attggatact acaatttccc attttgcttg  
 agaattccca  
 1501 tttttcctgt ttctacacca agttcagaag atccagtagc tggagatata  
 aaagggtgtg  
 1561 actgtaatct ggaaggtgtt ctccctgaaa tatgtgatgc ccacggacgg  
 tgctgtgccc  
 1621 gccctggggt tgagggccct cgatgtgata cctgcccgtc tggtttctac  
 tcattcccta  
 1681 tttgccaagc ctgctggtgt tcagcccttg gatcctacca gatgccctgc  
 agctcagtga  
 1741 ctggacagtg tgaatgtcgg ccaggagtta caggacagcg gtgtgacagg  
 tgtctctcag  
 1801 gagcttatga tttccccac tgccaagggt ccagcagtgc ttgtgacca  
 gctggtacca

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 FIG. 2C1

FIG. 2C (CONT)

1861 tcaactccaa tttggggtat tgccaatgca agcttcatgt tgaaggctct  
acttgtagcc  
1921 gctgcaaact gttatattgg aatctggaca aagaaaaccc cagtggatgt  
tcagaatgca  
1981 agtgccataa ggcgggaaca gtgagtggaa ctggagagtg taggcaggga  
gatgggtgact  
2041 gtcactgcaa gtcccatgtg ggtggcgatt cctgcgacac ctgtgaagat  
ggatattttg  
2101 ctttggaana gagcaattac tttgggtgtc aaggggtgtca gtgtgacatt  
ggtggggcat  
2161 tgtcctccat gtgcagtggg cctcgggag tgtgccagtg ccgagagcat  
gtcgtgggaa  
2221 aggtgtgcca gcggcctgaa aacaactact atttcccaga tttgcatcat  
atgaagtatg  
2281 agattgaaga cggcagcaca cctaattggga gagaccttcg atttggattt  
gatccgctgg  
2341 catttcctga gtttagctgg agaggatatg cccaaatgac ctcagtacag  
aatgatgtaa  
2401 gaataacatt gaatgtaggg aagtcaagtg gtccttgtt tcgtgttatt  
ctgagatacg  
2461 ttaaccctgg aactgaagca gtatctggcc atataactat ttatccatcc  
tgggggtgctg  
2521 ctcaaagcaa agagatcatc ttcttgccga gtaaggagcc agcctttgtc  
actgtccctg  
2581 gaaatgggtt tgcagacca ttttcaatca caccaggaat atgggttgct  
tgtattaagg  
2641 cagaaggagt ccttctggat tacctgggtg tgctccccag ggactactat  
gaagcctctg  
2701 tactgcagct gccagtcaca gaaccatgtg cctacgcagg acctccccaa  
gaaaattgct  
2761 tactctacca gcatttgcca gtgaccagat tcccctgtac cctggcttgt  
gaggccagac  
2821 acttctgct tgatggggag ccaagacccg tggcagtgtg gcagcccaca  
cctgcacacc  
2881 ctgtcatggt ggacctcagc gggagagagg tggaattgca tctgcggctg  
cgcacccac  
2941 aggttggcca ctacgtggtt gtggtcagat attccacgga ggcagctcag  
ctgtttgtgg  
3001 ttgatgtgaa tgtgaagagc tccgggtctg ttctggcagg ccaggtgaac  
atttacagct  
3061 gcaactacag tgttctctgc cggagtgtg tgattgatca catgagccgc  
atcgccatgt  
3121 atgagctatt ggcagatgca gacattcagc tcaagggaca catggcccga  
ttccttctgc

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FIG. 2C-1

FIG. 2C-1

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FIG. 2C-2

~~FIG. 2C~~ (CONT)

3181 atcaagtttg tatcatacct attgaagaat tctcagctga gtatgtgaga  
ccacaagtcc  
3241 actgcattgc cagttatggg cgatttgtca atcaaagtgc cacctgtgtc  
tccttgcccc  
3301 atgaaactcc tccaacagca ttaattttgg atgttctaag tggcaggcct  
ttccctcacc  
3361 tgccccagca gtcgtcacct tctggtgatg ttcttcctgg ggtcaccttg  
aaggcaccgc  
3421 agaatcaagt gaccctgaga ggacgtgtac cacacctggg ccgatacgtc  
tttgtcatcc  
3481 attttttacca agcagcgcac ccgacgtttc ccgcgcaggt gtcggtggat  
ggcgggtggc  
3541 cacgggcagg ctcttccat gcctcttttt gccccatgt gcttggtgc  
cgggatcaag  
3601 tgattgccga aggccagatt gagtttgaca tctcagagcc tgaagtggc  
gcaactgtga  
3661 aggttccaga aggaaagtcc ttggttttgg tccgtgttct agtgggtgcct  
gcagaaaact  
3721 atgactacca aatacttcac aaaaaatcca tggacaagtc actcgagttt  
atcaccaatt  
3781 gtggaaaaaa cagcttttac cttgaccccc agacagcctc cagattctgt  
aagaattccg  
3841 ccaggtcctt ggtggccttt taccacaagg gcgccctgcc ttgtgagtgc  
caccccactg  
3901 gggccaccgg cctcactgc agcctgagg gtgggcagtg cccatgccag  
cccaacgtca  
3961 tcgggcggca gtgcaccgc tgtgcaacag gccactacgg attcccacgc  
tgcaagccgt  
4021 gcagctgtgg tcggcgccct tgtgaagaga tgacggggca gtgccgctgc  
cctccccgca  
4081 cggtcaggcc ccagtgtgag gtgtgtgaga cacactcatt cagcttcac  
cccatggcgg  
4141 gctgcgaagg ctgcaactgt tccaggagg gcaccatcga ggctgccatg  
ccggagtgtg  
4201 accgggacag cgggcagtg agatgcaagc ccagaatcac agggcggcag  
tgtgaccgat  
4261 gtgcttcggg gttttaccgc tttcctgagt gtgttcctg caattgcaac  
agagatggga  
4321 ctgagccagg agtgtgtgac ccagggaccg gggcttgcct ctgcaaggaa  
aatgtagaag  
4381 gcacagagtg taatgtgtgt cgagaaggct cattccattt ggaccacgcc  
aatctcaagg  
4441 gttgtaccag ctgtttctgt tttggagtaa ataataatg tcacagctca  
cataagcgaa

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FIG. 2C2

FIG. 2C (CONT)

4501 ggactaagtt tgtggatatg ctgggctggc acctggagac agcagacaga  
gtggacatcc  
4561 ctgtctcttt caaccaggc agcaacagta tgggtggcgga tctccaggag  
ctgcccgcaa  
4621 ccattccacag cgcgtcctgg gtcgcacca cctcctacct gggggacaag  
gtttcttcat  
4681 atggtgggta cctcacttac caagccaagt cctttggctt gcctggcgac  
atggttcttc  
4741 tggaaaagaa gccggatgta cagctcactg gtcagcacat gtccatcatc  
tatgaggaga  
4801 caaacacccc acggccagac cggctgcac atggacgagt gcacgtggtc  
gagggaact  
4861 tcagacatgc cagcagccgt gcccagtgct ctaggaggga gctgatgaca  
gtgctgtcta  
4921 gactggcaga tgtgcgcac caaggcctct acttcacaga gactcaaagg  
ctcaccctga  
4981 gcgaggtggg gctagaggaa gcctctgaca caggaagtgg gcgcatagca  
cttgctgtgg  
5041 aaatctgtgc ctgccccct gcctacgctg gtgactcttg tcagggttgt  
agccctggat  
5101 actatcggga tcataaaggc ttgtataccg gacggtgtgt tccttgcaat  
tgcaacggac  
5161 attcaaata atgccaggat ggctcaggca tatgtgttaa ctgtcagcac  
aacaccgcg  
5221 gagagcactg tgaacgctgc caggagggct actatggcaa cgcgtccac  
ggatcctgca  
5281 gggcctgccc atgtcctcac actaacagct ttgccactgg ctgtgtgggtg  
aatgggggag  
5341 acgtgcggtg ctctgcaaa gctgggtaca caggaaacaca gtgtgaaagg  
tgtgcaccgg  
5401 gatatttcgg gaatccccag aaattcggag gtagctgcca accatgcagt  
tgtaacagca  
5461 atggccagct gggcagctgt catccctga ctggagactg cataaaccaa  
gaacccaaag  
5521 atagcagccc tgcagaagaa tgtgatgatt gcgacagctg tgtgatgacc  
ctcctgaacg  
5581 acctggccac catgggcgag cagctccgcc tggtaagtc tcagctgcag  
ggcctgagt  
5641 ccagcgcagg gcttctggag cagatgaggc acatggagac ccaggccaag  
gacctgagga  
5701 atcagttgct caactaccgt tctgccattt caaatcatgg atcaaaaata  
gaaggcctgg  
5761 aaagagaact gactgatttg aatcaagaat ttgagacttt gcaagaaaag  
gctcaagtaa

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FIG. 2C-2

~~FIG. 2C (CONT.)~~

5821 attccagaaa agcacaaca ttaaacaaca atgttaatcg ggcaacacaa } Formatted  
 agcgcaaaaag } as  
 FIG. 2C-2  
 5881 aactggatgt gaagattaaa<sup>8/28</sup> aatgtcatcc ggaatgtgca cattctttta  
 aagcagatct  
 5941 ctgggacaga tggagaggga aacaacgtgc cttcaggtga cttttccaga  
 gagtgggctg  
 6001 aagcccagcg catgatgagg gaactgcgga acaggaactt tggaaagcac  
 ctcagagaag  
 6061 cagaagctga taaaaggag tgcagctct tgctgaaccg gataaggacc  
 tggcagaaaa  
 6121 cccaccaggg ggagaacaat gggcttgcta acagtatccg ggattcttta  
 aatgaatag  
 6181 aagccaaact cagtgcctt cgtgctcggc tgcaggaggc agctgcccc  
 gccaaagcag  
 6241 caaatggctt gaaccaagaa aacgagagag ctttgggagc cattcagaga  
 caagtgaag  
 6301 aaataaattc cctgcagagt gatttcacca agtatctaac cactgcagac  
 tcatctttgt  
 6361 tgcaaacc aa cattgcgctg cagctgatgg agaaaagcca gaaggaatat  
 gaaaaattag  
 6421 ctgccagttt aaatgaagca agacaagaac taagtgacaa agtaagagaa  
 ctttccagat  
 6481 ctgctggcaa aacatccctt gtggaggagg cagaaaagca cgcgcggtcc  
 ttacaagagc  
 6541 tggcaaagca gctggaagag atcaagagaa acgccagcgg ggatgagctg  
 gtgcgctgtg  
 6601 ctgtggatgc cgccaccgcc tacgagaaca tcctcaatgc catcaaagcg  
 gccgaggagc  
 6661 cagccaacag ggctgccagt gcatctgaat ctgccctcca gacagtgata  
 aaggaagatc  
 6721 tgccaagaaa agctaaaacc ctgagttcca acagtgataa actgttaa  
 gaagccaaga  
 6781 tgacacaaaa gaagctaaag caagaagtca gtccagctct caacaaccta  
 cagcaaacc  
 6841 tgaatattgt gacagttcag aaagaagtga tagacaccaa tctcacaact  
 ctccgagatg  
 6901 gtcttcatgg gatacagaga ggtgatattg atgctatgat cagtagtgca  
 aagagcatgg  
 6961 tcagaaaggc caacgacatc acagatgagg ttctggatgg gctcaacccc  
 atccagacag  
 7021 atgtggaaag aattaaggac acctatggga ggacacagaa cgaagacttc  
 aaaaaggctc  
 7081 tgactgatgc agataactcg gtgaataagt taaccaacaa actacctgat  
 ctttggcgca

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 as  
 FIG. 2C-3

~~FIG. 2C (CONT)~~

7141 agattgaaag tatcaaccaa cagctgttgc ccttgggaaa catctctgac  
aacatggaca  
7201 gaatacgaga actaattcag caggccagag atgctgccag taaggttgct  
gtccccatga  
7261 ggttcaatgg taaatctgga gtcgaagtcc gactgccaaa tgacctggaa  
gatttgaaag  
7321 gatatacatc tctgtccttg tttctccaaa ggcccaactc aagagaaaat  
gggggtactg  
7381 agaatatggt tgtgatgtac cttggaaata aagatgcctc ccgggactac  
atcggcatgg  
7441 cagttgtgga tggccagctc acctgtgtct acaacctggg ggaccgtgag  
gctgaactcc  
7501 aagtggacca gatcttgacc aagagtgaga ctaaggaggc agttatggat  
cgggtgaaat  
7561 ttcagagaat ttatcagttt gcaaggctta attacaccaa aggagccaca  
tccagtaaac  
7621 cagaaacacc cggagtctat gacatggatg gtagaaatag caatacactc  
cttaatttgg  
7681 atcctgaaaa tgttgtatct tatgttggag gttaccaccc tgattttaaa  
cttcccagtc  
7741 gactaagttt cctccatac aaaggttgta ttgaattaga tgacctcaat  
gaaaatgttc  
7801 tgagcttgta caacttcaaa aaaacattca atctcaacac aactgaagtg  
gagccttgta  
7861 gaaggaggaa ggaagagtca gacaaaaatt attttgaagg tacgggctat  
gctcgagttc  
7921 caactcaacc acatgctccc atcccaacct ttggacagac aattcagacc  
accgtggata  
7981 gaggcttgct gttctttgca gaaaacgggg atcgcttcat atctctaaat  
atagaagatg  
8041 gcaagctcat ggtgagatac aaactgaatt cagagctacc aaaagagaga  
ggagttggag  
8101 acgccataaa caacggcaga gaccattcga ttcagatcaa aattggaaaa  
ctccaaaagc  
8161 gtatgtggat aaatgtggac gttcaaaaca ctataattga tgggtgaagta  
tttgatttca  
8221 gcacatatta tctgggagga attccaattg caatcaggga aagatttaac  
atttctacgc  
8281 ctgctttccg aggctgcatg aaaaatttga agaaaaccag tgggtgctgtt  
agattgaatg  
8341 atactgtggg agtaaccaa aagtgtcgg aagactggaa gcttgtgcga  
tctgcctcat  
8401 tctccagagg aggacaattg agtttcaactg atttgggctt accacctact  
gaccacctcc

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FIG. 2C3



FIG. 2C (CONT)

8461 aggcctcatt tggatttcag acctttcaac ccagtggcat attattagat  
catcagacat  
8521 ggacaaggaa cctgcaggtc actctggaag atggttacat tgaattgagc  
accagcgata  
8581 gcggcagccc aattttttaa tctccacaga cgtatatgga tggtttactg  
cattatgtat  
8641 ctgtaataag cgacaactct ggactacggc ttctcatcga tgaccagctt  
ctgagaaata  
8701 gcaaaaggct aaaacacatt tcaagttccc ggcagtctct gcgtctgggc  
gggagcaatt  
8761 ttgagggttg tattagcaat gtttttgtcc agaggttatc actgagtcct  
gaagtcctag  
8821 atttgaccag taactctctc aagagagatg tgtccctggg aggctgcagt  
ttaaacaac  
8881 caccttttct aatgttgctt aaaggttcta ccaggtttaa caagaccaag  
acttttcgta  
8941 tcaaccagct gttgcaggac acaccagtgg cctccccaag gagcgtgaag  
gtgtggcaag  
9001 atgcttgctc accacttccc aagaccagc ccaatcatgg agccctccag  
tttggggaca  
9061 ttcccaccag ccacttgcta ttcaagcttc ctcaggagct gctgaaaccc  
aggtcacagt  
9121 ttgctgtgga catgcagaca acatcctcca gaggactggg gtttcacacg  
ggcactaaga  
9181 actcctttat ggctctttat ctttcaaaag gacgtctggg ctttgcactg  
gggacagatg  
9241 ggaaaaaatt gaggatcaaa agcaaggaga aatgcaatga tgggaaatgg  
cacacgggtg  
9301 tgtttggcca tgatggggaa aaggggcgct tggttgtgga tggactgagg  
gcccgggagg  
9361 gaagtttgcc tggaaactcc accatcagca tcagagcgcc agtttacctg  
ggatcacctc  
9421 catcagggaa accaaagagc ctcccacaaa acagctttgt gggatgcctg  
aagaactttc  
9481 agctggattc aaaacccttg tataccctt cttcaagctt cggggtgtct  
tcctgcttgg  
9541 gtggtccttt ggagaaaggc atttatttct ctgaagaagg aggtcatgtc  
gtcttggtc  
9601 actctgtatt gttggggcca gaatttaagc ttgttttcag catccgcca  
agaagtctca  
9661 ctgggatcct aatacacatc ggaagtcagc ccgggaagca cttatgtgtt  
tacctggagg  
9721 caggaaaggc cacggcctct atggacagtg gggcaggtgg gacctcaacg  
tcggtcacac

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FIG. 2C-3

FIG. 2C-3

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FIG. 2C-4

~~FIG. 2C~~ (CONT)

9781 caaagcagtc tctgtgtgat ggacagtggc actcgggtggc agtcaccata  
aaacaacaca  
9841 tcctgcacct ggaactggac acagacagta gctacacagc tggacagatc  
cccttccac  
9901 ctgccagcac tcaagagcca ctacacctg gaggtgctcc agccaatttg  
acgacactga  
9961 ggatccctgt gtggaaatca ttctttggct gtctgaggaa tattcatgtc  
aatcacatcc  
10021 ctgtccctgt cactgaagcc ttggaagtcc aggggcctgt cagtctgaat  
ggttgtcctg  
10081 accagtaacc caagcctatt tcacagcaag gaaattcacc ttcaaaagca  
ctgattaccc  
10141 aatgcacctc cctccccagc tcgagatcat tcttcaactca ggacacaaac  
cagacagggt  
10201 taatagcgaa tctaattttg aattctgacc atggataccc atcactttgg  
cattcagtgc  
10261 tacatgtgta ttttatataa aaatcccatt tcttgaagat aaaaaaattg  
ttattcaa  
10321 tgttatgcac agaatgtttt tggtaatatt aatttcact aaaaaattaa  
atgtctttta  
10381 agaaacattc ttttcactt gttaaaaaaa ttaaataat tttaaagcac  
tttaagaata  
10441 tgaaactttc atatatgtta aaggattata atttatggaa ttaaaaaatg  
cagtgtagtc  
10501 cttaaaaaaa a

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as

FIG. 2C-4

FIG. 2C-4

~~FIG. 2D~~

10/28

MAAAARPRGRALGPVLPPTPLLLLVLRLVPACGATARDPGAAAG

LSLHPTYFNLAEAAARIWATATCGERGPGEGRPQPELYCKLVGGPTAPGSGHTIQGQFC  
DYCNSEDPRKAHPVTNAIDGSRWWQSPPLSSGTQYNRVNLTLDLGQLFHVAYILIKF  
ANSRPDLWVLERSVDFGSTYSPWQYFAHSKVDCLKEFGREANMAVTRDDDVLVTEY  
SRIVPLENGEVVSLINGRPGAKNFTFSHTLREFTKATNIRLRLRTNTLLGHLISKA  
QRDPTVTRRYYYYSIKDISIGGQVCNGHAEVCNINNPEKLFRCECQHHTCGETCDRCC  
TGYNQRRWRPAAWEQSHECEACNCHGHASNCYYDPDVERQQASLNTQGIYAGGGVCIN  
CQHNTAGVNCEQCAKGYRYPYGPVVDAPDGCIPCSCDPEHADGCEQSGRCHCKPNFH

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FIG. 2D-1

FIG. 2D (CONT)

GDNCEKCAIGYYNFPFCLRIPIFPVSTPSSDPVAGDIKGCDNLEGLVPEICDAHGR  
CLCRPGVEGPRCDTCRSGFYSPICQACWCSALGSYQMPCCSVTGQCECRPGVTGQRC  
DRCLSGAYDFPHCQGSSSACDPAGTINSNLGYCQCKLHVEGPTCSRCKLLYWNLDKEN  
PSGCSECKCHKAGTVSGTGECRQGDGDCHCKSHVGGDSCDTCEDGYFALEKSNYFGCQ  
GCQCDIGGALSSMCSGPGVCQCREHVVGKVCQRPENNYFPDLHMKYEIEDGSTPN  
GRDLRFGFDPLAFPEFSWRGYAQMTSVQNDVRITLNVGKSSGSLFRVILRYVNPGETA  
VSGHITIYPSWGAAQSKEIIFLPSKEPAFVTVPGNGFADPFSITPGIWWACIKAEGVL  
LDYLVLLPRDYEASVLQLPVTEPCAYAGPPQENCLLYQHLPVTRFPCTLACEARHFL  
LDGEPRPVAVRQPTPAHPVMVDLSGREVELHLRLRIPQVGHYVVVVEYSTAAQLFVV  
DVNVKSSGSLAGQVNIYSCNYSVLCRSAVIDHMSRIAMYELLADADIQLKGHMARFL  
LHQVCIPIIEEFAEYVRPQVHCIAASYGRFVNQSATCVSLAHETPPTALILDVLSGRP  
FPHLPQQSSPSVDVLPGVTLKAPQNQVTLRGRVPHLGRYVFVIHFYQAAHPTFPAQVS  
VDGGWPRAGSFHASFCPHVLGCRDQVIAEGQIEFDISEPEVAATVKVPEGKSLVLVRV  
LVVPAENYDYQILHKKSMDSLEFITTNCGKNSFYLDPQTASRFCKNSARSLVAFYHKG  
ALPCECHPTGATGPHCSPEGGQCPCQPNVIGRQCTRCATGHYGFPRCKPCSCGRRICE  
EMTGQCRCPPTVRPQCEVCETHSFSFHPMAGCEGCNCSRRGTIEAAMPECDRDSGQC  
RCKPRITGRQCDRCASGFYRFPECVPCNCNRDGTGPGVCDPGTGACLCKENVEGTECN  
VCREGSFHLDPANLKGCTSCFCFGVNNQCHSSHKRRTKFVDMLGWHLETADRVDIPVS  
FNPGSNSMVADLQELPATIHSASWVAPTSYLGDKVSSYGGYLTQAKSFGLPGDMVLL  
EKKPDVQLTGQHMSIIYEETNTPRPDLHHGRVHVVEGNFRHASSRAPVSREELMTVL  
SRLADVRIQGLYFTETQRLTLSEVGLLEEASDTGSGRIALAVEICACPPAYAGDSCQGC  
SPGYRDKHGLYTGRVCPCNCNGHSNQCQDGSIGVNCQHNTAGEHCERCQEGYYGNA

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FIG. 2D-1

~~FIG. 2D (CONT)~~

VHGSCRACPCPHTNSFATGCVVNGGDVRCSCKAGYTGTQCERCAPGYFGNPQKFGGSC  
QPCSCNSNGQLGSCHPLTGDCINQEPKDSSPAECDDCDSCVMTLLNDLATMGEQLRL  
VKSQLOGLSASAGLLEQMRHMETQAKDLRNQLLNYSASINHGSKIIEGLERELTDLNQ  
EFETLQEKAAQVNSRKAQTLNNNVNRATQSAKELDVKIKNVIRNVHILLKQISGTDGEG  
NNVPSGDFSREWAEAQRMRELNRNFGKHLREAEADKRESQLLLNRIRTWQKTHQGE  
NNGLANSI RDSLNEYEAKLSDLRARLQEAQAQKQANGLNQENERALGAIQRQVKEIN  
SLQSDFTKYLTADSSLLQTNIALQLMEKSQKEYEKLAASLNEARQELSDKVRELSRS  
AGKTSLVEEAEKHARSLQELAKQLEEIKRNASGDELVRCAVDAATAYENILNAIKAAE  
DAANRAASASESALQTVIKEDLPRKAKTLSSNSDKLLNEAKMTQKKLKQEVSPALNNL  
QOTLNIVTVQKEVIDTNLTTLRDGLHGIQRGDIDAMISSAKSMVRKANDITDEVLDGL  
NPIQTDVERIKDTYGRNQNEDFKKALTDADNSVNKLTKLPDLWRKIESINQQLPLG  
NISDNMDRIRELIQQARDAASKVAVPMRFNGKSGVEVRLPNDLEDLKGYSLSLFLQR  
PNSRENGGTENMFVMYLGNKDASRDYIGMAVVDGQLTCVYNLGDREAEQVDQILTKS  
ETKEAVMDRVKFQRIYQFARLNYTKGATSSKPEPTPGVYDMDGRNSNTLLNLDPENNVF

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FIG. 2D-1

FIG. 2D-1

YVGGYPPDFKLPSRLSFPPYKGCIELDDL<sup>11/20</sup>NEVL<sup>11/20</sup>SLYNFKKTFNLNTTEVEPCRRRKE  
ESDKNYFEGTGYARVPTQPHAPIPTFGQTIQTTVDRGLLFFAENGDRFISLNIEDGKL  
MVRYKLNSELPKERGVGDAINNGRDHSIQIKIGKLQKRMWINVDVQNTIIDGEVFD  
TYYLGGIPIAIRERFNISTPAFRGCMKNLKKTSGVVRLNDTVGVTKKCSWDKLV  
SFSRGGQLSFTDLGLPPTDHLQASFGFQTFQPSGILLDHQWTRNLQVTLEDGYIEL  
TSDSGSPIFKSPQTYMDGLLHYVSVISDNGLRLLIDDQLLRNSKRLKHISRRQSLR  
LGGSNFEGCISNVFVQRLSLSPEVLDLTSNSLKR<sup>11/20</sup>SVLGGCSLNKPPFLMLLKGST  
NKTKTFRINQLLQDTPVASPRSVK<sup>11/20</sup>VQDACSP<sup>11/20</sup>LPKTQANHGALQFGDIPTSHLLFKLP

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FIG. 2D-2

~~FIG. 2D~~ (CONT)

QELLKPRSQFAVDMQTTSSRGLVFHTGTKNSFMALYLSKGRLVFALGTDGKKLRISK  
EKCNDGKWHTVVFGHDGEKGRLVVDGLRAREGSLPGNSTISIRAPVYLGSPPSGKPKS  
LPTNSFVGCLKNFQLDSKPLYTPSSSFGVSSCLGGPLEKGIYFSEEGGHVVLHSHVLL  
GPEFKLVFSIRPRSLTGILIHIGSQPGKHL CVYLEAGKVTASMDSGAGGTSTSVTPKQ  
SLCDGQWHSVAVTIKQHILHLELDTSSYTAGQIPFPASTQEPLHLGGAPANLTTLR  
IPVWKSFFGCLRNIHVNHIPVPVTEALEVQGPVSLNGCPDQ"

FIG. 2D-2

~~FIG. 2E~~

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FIG. 2D-2

1 gggatgcctc cagcagtgag gcggtcagcc tgcagcatgg gatggctgtg  
gatctttggg  
61 gcagccctgg ggcagtgtct gggctacagt tcacagcagc aaagggtgcc  
atttcttcag  
121 cctcccgggc aaagtcaact gcaagcgagt tatgtggagt ttagaccag  
ccagggttgt  
181 agccctggat actatcgga tcataaaggc ttgtataccg gacgggtgtg  
tcctgcaat  
241 tgcaacggac attcaaatca atgccaggat ggctcaggca tatgtgttaa  
ctgtcagcac  
301 aacaccgcgg gagagcactg tgaacgctgc caggagggct actatggcaa  
cgccgtccac  
361 ggatcctgca gggcctgccc atgtcctcac actaacagct ttgccactgg  
ctgtgtgggt  
421 aatgggggag acgtgcggtg ctctgcaaa gctgggtaca caggaacaca  
gtgtgaaagg  
481 tgtgcaccgg gatatttcgg gaatccccag aaattcggag gtagctgcca  
accatgcagt  
541 tgtaacagca atggccagct gggcagctgt catcccctga ctggagactg  
cataaaccac  
601 gaacccaaag atagcagccc tgcagaagaa tgtgatgatt ggcacagctg  
tgtgatgacc  
661 ctctgaacg acctggccac catgggagag cagctccgcc tggtaagtc  
tcagctgcag  
721 ggctgagtg ccagcgcagg gcttctggag cagatgagga acatggagac  
ccaggccaag  
781 gacctgagga atcagttgct caactaccgt tctgccattt caaatcatgg  
atcaaaaata

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FIG. 2E-1

~~FIG. 2E (CONT)~~

841 gaaggcctgg aaagagaact gactgatttg aatcaagaat ttgagacttt  
gcaagaaaaag  
901 gctcaagtaa attccagaaa agcacaaaaca ttaaacaaca atgttaatcg  
ggcaacacaa  
961 agcgcaaaaag aactggatgt gaagattaaa aatgtcatcc ggaatgtgca  
cattctttta  
1021 aagcagatct ctgggacaga tggagaggga aacaacgtgc cttcaggtga  
cttttccaga  
1081 gagtgggctg aagcccagcg catgatgagg gaactgcgga acaggaactt  
tggaagcac  
1141 ctgagagaag cagaagctga taaaaggag tgcagctct tgctgaaccg  
gataaggacc  
1201 tggcagaaaa cccaccaggg ggagaacaat gggcttgcta acagtatccg  
ggattcttta  
1261 aatgaatagc aagccaaact cagtgcctt cgtgctcggc tgcaggaggc  
agctgcccaa  
1321 gccaaagcagg caaatggctt gaaccaagaa aacgagagag ctttgggagc  
cattcagaga  
1381 caagtgaaag aaataaattc cctgcagagt gatttcacca agtatctaac  
cactgcagac  
1441 tcatctttgt tgcaaaccaa cattgcgctg cagctgatgg agaaaagcca  
gaaggaatat  
1501 gaaaaattag ctgccagttt aaatgaagca agacaagaac taagtgacaa  
agtaagagaa  
1561 ctttccagat ctgctggcaa aacatccctt gtggaggagg cagaaaagca  
cgcgcggtcc  
1621 ttacaagagc tggcaaagca gctggaagag atcaagagaa acgccagcgg  
ggatgagctg  
1681 gtgcgctgtg ctgtggatgc cgccaccgcc tacgagaaca tcctcaatgc  
catcaaagcg  
1741 gccgaggacg cagccaacag ggctgccagt gcatctgaat ctgccctcca  
gacagtgata  
1801 aaggaagatc tgccaagaaa agctaaaacc ctgagttcca acagtgataa  
actgttaa  
1861 gaagccaaga tgacacaaaa gaagctaaag caagaagtca gtccagctct  
caacaaccta  
1921 cagcaaacc cagaatattgt gacagttcag aaagaagtga tagacaccaa  
tctcacaact  
1981 ctccgagatg gtcttcatgg gatacagaga ggtgatattg atgctatgat  
cagtagtgca  
2041 aagagcatgg tcagaaaggc caacgacatc acagatgagg ttctggatgg  
gctcaacccc  
2101 atccagacag atgtggaaag aattaaggac acctatggga ggacacagaa  
cgaagacttc

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to  
FIG. 2E-1

~~FIG. 2E (CONT)~~

2161 aaaaaggctc tgactgatgc agataactcg gtgaataagt taaccaacaa  
actacctgat  
2221 ctttggcgca agattgaaag tatcaaccaa cagctgttgc ccttgggaaa  
catctctgac  
2281 aacatggaca gaatacgaga actaattcag caggccagag atgctgccag  
taaggttgct  
2341 gtcccatga gggtcaatgg taaatctgga gtcgaagtcc gactgccaaa  
tgacctggaa  
2401 gatttgaaag gatatacatc tctgtccttg tttctccaaa ggcccaactc  
aagagaaaat  
2461 gggggactg agaatatgtt tgtgatgtac cttggaaata aagatgcctc  
ccgggactac  
2521 atcggcatgg cagttgtgga tggccagctc acctgtgtct acaacctggg  
ggaccgtgag  
2581 gctgaactcc aagtggacca gatcttgacc aagagtgaga ctaaggaggc  
agttatggat  
2641 cgggtgaaat ttcagagaat ttatcagttt gcaaggctta attacaccaa  
aggagccaca  
2701 tccagtaaac cagaaacacc cggagtctat gacatggatg gtagaaatag  
caatacactc  
2761 cttaatttgg atcctgaaaa tgttgtatth tatgttggag gttaccacc  
tgatttttaa  
2821 cttcccagtc gactaagttt cctccatac aaaggttgta ttgaattaga  
tgacctcaat  
2881 gaaaatgttc tgagcttgta caacttcaaa aaaacattca atctcaacac  
aactgaagtg  
2941 gagccttgta gaaggaggaa ggaagagtca gacaaaaatt attttgaagg  
tacgggctat  
3001 gctcgagttc caactcaacc acatgctccc atcccaacct ttggacagac  
aattcagacc  
3061 accgtggata gaggcttgct gttctttgca gaaaacgggg atcgcttcat  
atctctaaat  
3121 atagaagatg gcaagctcat ggtgagatac aaactgaatt cagagctacc  
aaaagagaga  
3181 ggagttggag acgccataaa caacggcaga gaccattcga ttcagatcaa  
aattggaaaa  
3241 ctccaaaagc gtatgtggat aaatgtggac gttcaaaaca ctataattga  
tggtgaagta  
3301 tttgatttca gcacatatta tctgggagga attccaattg caatcagga  
aagatttaac  
3361 atttctacgc ctgctttccg aggctgcatg aaaaatttga agaaaaccag  
tggtgtcgtt  
3421 agattgaatg atactgtggg agtaaccaa aagtgtcgg aagactggaa  
gcttgtgcga

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FIG. 2E-1

FIG. 2E-1  
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FIG. 2E-2

**FIG. 2E (CONT)**

3481 tctgcctcat tctccagagg aggacaattg agtttctactg atttgggctt  
accacctact  
3541 gaccacctcc aggcctcatt tggatttcag acctttcaac ccagtggcat  
attattagat  
3601 catcagacat ggacaaggaa cctgcaggtc actctggaag atggttacat  
tgaattgagc  
3661 accagcgata gcggcagccc aatttttaaa tctccacaga cgtatatgga  
tggtttactg  
3721 cattatgtat ctgtaataag cgacaactct ggactacggc ttctcatcga  
tgaccagctt  
3781 ctgagaaata gcaaaaggct aaaacacatt tcaagttccc ggcagtctct  
gcgtctgggc  
3841 gggagcaatt ttgagggttg tattagcaat gtttttgtcc agaggttatc  
actgagtctt  
3901 gaagtcctag atttgaccag taactctctc aagagagatg tgtccctggg  
aggctgcagt  
3961 ttaaacaac caccttttct aatgttgctt aaaggttcta ccaggtttaa  
caagaccaag  
4021 acttttcgta tcaaccagct gttgcaggac acaccagtgg cctccccaag  
gagcgtgaag  
4081 gtgtggcaag atgcttgctc accacttccc aagaccagg ccaatcatgg  
agccctccag  
4141 tttggggaca ttcccaccag ccacttgcta ttcaagcttc ctcaggagct  
gctgaaaccc  
4201 aggtcacagt ttgctgtgga catgcagaca acatcctcca gaggactggt  
gtttcacacg  
4261 ggcactaaga actcctttat ggctctttat ctttcaaaag gacgtctggt  
ctttgcactg  
4321 gggacagatg ggaaaaaatt gaggatcaaa agcaaggaga aatgcaatga  
tgggaaatgg  
4381 cacacggtgg tgtttgcca tgatggggaa aaggggcgct tggttgtgga  
tggaactgagg  
4441 gcccgaggagg gaagtttgcc tggaaactcc accatcagca tcagagcgcc  
agtttacctg  
4501 ggatcacctc catcaggga accaaagagc ctccccacaa acagctttgt  
gggatgcctg  
4561 aagaactttc agctggattc aaaacccttg tataccctt cttcaagctt  
cggggtgtct  
4621 tcctgcttgg gtggctcttt ggagaaaggc atttatttct ctgaagaagg  
aggatcatg  
4681 gtcttggtc actctgtatt gttggggcca gaatttaagc ttgttttcag  
catccgcca  
4741 agaagtctca ctgggatcct aatacacatc ggaagtcagc ccgggaagca  
cttatgtgtt

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FIG. 2E-2



~~FIG. 2E (CONT)~~

4801 tacctggagg caggaaaggt cacggcctct atggacagtg gggcaggtgg  
gacctcaacg  
4861 tcggtcacac caaagcagtc tctgtgtgat ggacagtggc actcgggtggc  
agtcaccata  
4921 aaacaacaca tcttgcacct ggaactggac acagacagta gctacacagc  
tggacagatc  
4981 cccttcccac ctgccagcac tcaagagcca ctacaccttg gaggtgctcc  
agccaatttg  
5041 acgacactga ggatccctgt gtggaaatca ttctttgggt gtctgaggaa  
tattcatgtc  
5101 aatcacatcc ctgtccctgt cactgaagcc ttggaagtcc aggggcctgt  
cagtctgaat  
5161 ggttgtcctg accagtaacc caagcctatt tcacagcaag gaaattcacc  
ttcaaaagca  
5221 ctgattaccc aatgcacctc cctccccagc tcgagatcat tcttcactca  
ggacacaaac  
5281 cagacagggt taatagcgaa tctaattttg aattctgacc atggatcccc  
atcacttttg  
5341 cattcagtgc tacatgtgta ttttatataa aaatcccatt tcttgaagat  
aaaaaaattg  
5401 ttattcaa at tgttatgcac aga atgtttt tggtaatatt aatttccact  
aaaaaattaa  
5461 atgtctttta agaaacattc ttttccactt gttaaaaaaa ttaaatatat  
tttaaagcac  
5521 tttaagaata tgaaactttc atatatgtta aaggattata atttatggaa  
ttaaaaaatg  
5581 cagtgtagtc cttaaaaaaa a

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FIG. 2E-2

FIG. 2E-2

~~FIG. 2F~~

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MPPAVRRSACSMGWLWIFGAALGQCLGYSSQQQVRVFLQPPGQS  
QLQASYVEFRPSQGCSPGYRDKGLYTGRVCPCNCNGHSNQCQDGSIGVCNCQHNTA  
GEHCERCQEGYYGNAVHGSCRACPCPHTNSFATGCVVNGGDVRCCKAGYTGTQCERC  
APGYFGNPQKFGGSCQPCSCNSNGQLGSCHPLTGDCINQEPKDSSPAEECDSCDSCVM  
TLLNDLATMGEQLRLVKSQLOGLSASAGLLEQMRHMETQAKDLRNQLLNYRSAISNHG  
SKIEGLERELTDLNQEFETLQEKAVNSRKAQTLNNNVNRATQSAKELDVKIKNVIRN  
VHILLKQISGTDGEGNNVPSGDFSREWAEQMMRELNRNFGKHLREAEADKRESQL

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FIG. 2F

~~FIG. 2F~~ (CONT)

LLNRIRTWQKTHQGENNGLANSIRDSLNEYEAKLSDLRARLQEAAAQAKQANGLNQEN  
ERALGAIQRQVKEINSLQSDFTKYLTADSSLLQTNIALQLMEKSQKEYEKLAAASLNE  
ARQELSDKVRELSRSAGKTSLVEEAEKHARSLQELAKQLEEIKRNASGDELVRCAVDA  
ATAYENILNAIKAAEDAANRAASASESALQTVIKEDLPRKAKTLSSNSDKLLNEAKMT  
QKKLKQEVSPALNNLQOTLNIVTVQKEVIDTNLTTLRDGLHGIQRGDIDAMISSAKSM  
VRKANDITDEVLDGLNPIQTDVERIKDTYGRQTQNEDEFKALTDADNSVNKLTKNLPDL  
WRKIESINQQLPLGNI SDNMDRI RELIQQARDAASKVAVPMRFNGKSGVEVRLPNDL  
EDLKGYTSLSLFLQRPNSRENGGTENMFVMYLGNKDASRDYIGMAVVDGQLTCVYNLG  
DREAELQVDQILTKSETKEAVMDRVKFQRIYQFARLNYTKGATSSKPETPGVYDMDGR  
NSNTLLNLDPENVVFYVGGYPDFKLP SRLSFPPYKGCIELDDL NENVLSLYNFKKTF  
NLNTTEVEPCRRRKEESDKNYFEGTGYARVPTQPHAPIPTFGQTIQTTVDRGLLFFAE  
NGDRFISLNIEDGKLMVRYKLNSELPKERGVGDAINNGRDHSIQIKIGKLQKRMWINV  
DVQNTIIDGEVDFDSTYYLGGIPIAIRERFNI STPAFRGCMKNLKKTSGVVRLNDTVG  
VTKKCEDWKLVRSA SF SRGGQLSFTDLGLPPTDHLQASFGFQTFQPSGILLDHQTWT  
RNLQVTLEDGYIELSTSDSGSPIFKSPQTYMDGLLHYVSVIDNSGLRLLIDDQLLRN  
SKRLKHISRRQSLRLGGSNFEGCISNVFVQRLSLSPEVLDLTSNSLKRDVSLGGCSL  
NKPPFLMLLKGSTRFNKT KTFRINQLLQDTPVASPRSVK VWDACSPLPKTQANH GAL  
QFGDIPTSHLLFKLPQELLKPRSQFAVDMQTTSSRGLVFHTGTKNSFMALYLSKGR LV  
FALGTDGKKLRIKSKEKCNDGKWHTVVF GHDGEKGR LVVDGLRAREGSLPGNSTISIR  
APVYLGSPPSGPKPSLPTNSFVGCLKNFQLDSKPLYTPSSSFGVSSCLGGPLEKGIYF  
SEEGGHVVL AHSVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHL CVYLEAGKVTASM  
DSGAGGTSTSVTPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFP PASTQE

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FIG. 2F

~~FIG. 2F (CONT)~~

PLHLGGAPANLTTLRIPVWKSFFGCLRNIHVNHIPVPVTEALEVQGPVSLNGCPDQ

FIG.-2F

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FIG.-2F

~~FIG. 2G~~

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1 gtataagagg aagaacacaa aggtttgcag cagccaggca gaacaccaag  
ggatcaagat  
61 gccgcctaca gtgaggtggt cagcctggtg cacaggatgg ctgtggatct  
ttggggcagc  
121 tctggggccag tgcctgggggt atggctcaga gcagcaaagg gtagcatttc  
ttcagcatcc  
181 agggcaaaac catctgcaag caagttatat ggagcttaga cccagccagg  
gctgtcgccc  
241 aggatactat cgagacatca aaagcttccc tgcgggaagg tctgttcct  
gcaattgcaa  
301 cggacattca aatagatgcc aagacggctc gggagtgtgc attaactgtc  
agcacaacac  
361 agctggggag cactgtgagc gttgcaagag gggttactat ggaagcgcca  
tccatggatc  
421 ctgcagggtt tgcccctgtc ctcacaccaa cagctttgcc actggctgtg  
ctgtggatgg  
481 aggagctgtg aggtgtgcct gcaaaccggg atacacagga gcacagtgtg  
agaggtgtgc  
541 accaggatat tttgggaacc cccagaaatt tggaggtagc tgccaaccat  
gcaattgcaa  
601 cagtaatggc cagtttggca cttgtgatcc cctaactgga gactgtgtaa  
gccaagaacc  
661 caaagatggc agccctgcag aagaatgtga tgactgtgac agctgtgtga  
tgactctcct  
721 aatgacttg gtcccatgg gtgaggaact cgccctggtg aatcaaaac  
ttcaggggt  
781 gagtgtgaac actggttctc tggaacagat ccggcatgtg gagatgcagg  
ccaaggacct  
841 gaggaaccag ctgcttggt tccgttcgc catctccagt cacgggtccc  
aaatggacgg  
901 cctggaaaaa gaactcagtc atttgtacca ggaattcgaa actttgcaag  
aaaaggcgca  
961 ggtcaattcc agaaaagcac aaacattata taacaacatc gatacgacaa  
tccaaaacgc  
1021 caaagagttg gacatgaaga ttaaaaacat acttacgaat gtgcacattc  
tcctgaagca  
1081 gatcgctcgg ccaggtggag aaggaatgga cttgccggtg ggcgactggt  
ccagggagtc

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as  
FIG.-2G-1

**FIG. 26 (CONT)**

1141 ggcggaagct cagcgcacgt tgcgggagct gcgaggccga gactttaaaa  
agcacctcca  
1201 agaagcagag gccagaaaa tggaagccca gctcttactg aaccgaatca  
ggacctggct  
1261 ggaatcccac caggtggaga acaatggact gctaaagaat attcgggatt  
cattaaatga  
1321 ttatgaagcc aaacttcagg acctgcgttc cgtgcttcag gaggcggcag  
cccagggaaa  
1381 gcaggctaca ggcctcaacc acgaaaatga gggggtccta ggagccatcc  
agagacaaat  
1441 gaaggaaatg gattccctga agaagtacct caccgagcac ctggccacag  
cagacgcttc  
1501 cctgctgcaa accaacagtc tactgcagcg gatggacacg agccagaagg  
agtatgaaag  
1561 cttagctgct gctttaaacg gagcaagaca ggaactgaat gaccaagtgc  
gggaactctc  
1621 cagatccgga ggcaaagcac ccctgggtggc tgaggccgag aagcacgctc  
agtctttaca  
1681 ggagctggca aagcagctgg aagagataaa gagaaacacc agtggggatg  
agtcggtgcg  
1741 ctgtgtcgtg gacgctgcca ctgcctatga gagcatcctc aacgccatcc  
gagcagcaga  
1801 ggatgcagcc ggcaaggccg acagtgcctc agagtccgcc ttccagacag  
tgataaagga  
1861 agatcttccg agaagagcca aaaccctgag ttctgacagc gaggaactgt  
taaacgaggc  
1921 caagatgaca cggaaaaggc tacagcaaga aatcaatcca gctctcaaca  
gcctacagca  
1981 aaccctgaag actgtatcag ttcagaagga cctgctagat gccaatgtca  
ctgctgtccg  
2041 taatgacctt cgtgggatcc agagaggtga tattgacagt gtggtgagtg  
gagcgaagag  
2101 catggtcagg aaagccaatg ggataacgag cgaggtcctg gacgggctca  
gccccatcca  
2161 gacggatttg ggaaggatta aggacagcta cgggagcaca cggcatgagg  
acttcaacaa  
2221 agctctgatt gacgccaata actcagtaaa gaaattaacc aagaagttgc  
ctgatctttt  
2281 tgtcaagatt gaaagcatca atcaacagtt gctgcccctg ggaaacatct  
ctgacaatgt  
2341 agaccgaatc cgagagctca ttacgcaggc cagagatget gcgaacaagg  
ttgcaattcc  
2401 catgagggtc aatggtaaatt ctggtgttga agtccgtctg ccaaattgacc  
tagaagactt

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Fig. 26-1

FIG. 2G (CONT)

2461 gaagggatac acgtctctgt ctttgttcct ccaaagacca gacttaagag  
agaatggagg  
2521 cactgaggac atgtttgtaa tgtaccttgg aaacaaggat gcctccaagg  
actacatcgg  
2581 catggcggtt gtagatggcc agctgacgtg tgtctacaac ctggggggacc  
gagaagctga  
2641 agttcagatc gatcagggtc tgacggagag tgagtctcag gaggcagtta  
tggaccgggt  
2701 gaagttccag agaatatatc aatttgccaa gcttaattac accaaagaag  
ccacgtccaa  
2761 taaacccaaa gctcccgcgg tctacgacct ggagggtggc agtagcaaca  
cgctccttaa  
2821 tttggatccc gaggacgctg tgttttatgt cggagggttac ccaccggatt  
ttgaacttcc  
2881 tagcagactg cggttccctc catacaaagg ctgtatcgaa ctagatgacc  
tcaatgaaaa  
2941 cgttctaagc ttgtacaatt tcaagacaac tttcaatctc aacaccacgg  
aggtggagcc  
3001 ttgtaggagg agaaaggaag agtcagacaa aaattacttt gaaggtaacag  
gctatgctcg  
3061 catccctact caaccaaagtg ctcccttccc aaacttcata cagaccatcc  
agactactgt  
3121 ggacagaggt ttactgttct tcgcagaaaa ccaggataac ttcatatctc  
tgaacataga  
3181 agatggcaat ctcatggtga gatacaaact aaattcagag ccacccaaag  
agaagggaat  
3241 tcgagacacc atcaacgatg ggaaagatca ttcgatctta atcacaattg  
gaaaactaca  
3301 aaaacgcatg tggataaatg tgaacgaacg cagtgtacga atcgaagggg  
aaatatttga  
3361 tttcagcaca tattatttgg gcggaattcc aattgcaatc agagaaagg  
ttaacatctc  
3421 aacgcctgct ttccaaggct gcatgaagaa tctgaagaaa accagtgggg  
ttgtcagggt  
3481 gaatgatact gtgggtgtaa ccaagaagtg ctcagaagac tggaagcttg  
tgcaaccgc  
3541 ctcgttctcc agaggagggc agatgagctt tacaaacttg gacgtgccct  
cgactgaccg  
3601 cttccagctc tcctttgggt ttcagacctt tcaacccagt ggcacactgc  
tcaatcatca  
3661 gacgcggaca agcagcctgc tggtcaccct ggaagatggg cacattgagt  
tgagcactag  
3721 ggacagcaac atcccaattt tcaagtctcc agggacctac atggacgggt  
tactgcatca

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FIG. 2G-1

FIG. 2G-1  
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FIG. 2G-2

~~FIG. 2G~~ (CONT)

3781 tgtatctgta ataagtgaca cctcaggtct cgccttctc atcgatgacc  
aggctcctgag  
3841 aaggaaccag aggcttecta gcttctctaa cgcccagcag tcgctccgcc  
ttggaggagg  
3901 tcatttcgag ggttgtatca gcaatgtttt agtccaaagg ttttcacaga  
gtccagaagt  
3961 cctggatctg gccagtaa ataccaagaa ggatgcatcc ctaggaggct  
gcagtttaaa  
4021 caagccacct tttcttatgt tgtttaaaag tcccaagaga tttacaagg  
gccggatttt  
4081 caatgttaat cagctgatgc aagatgcacc tcaggccaca aggagcacag  
aggcttgga  
4141 agatgggagg tctgcctac cacctctgaa caccaaggcc tctcacagag  
ccctgcagtt  
4201 tggagacagc cccaccagcc acttgctact caagcttccc caggaactgc  
tgaaacctag  
4261 gtcacagttt tctttagaca tacagacaac tcccccaaa ggactggtgt  
tttaacgagg  
4321 caccaaggac tccttcttg ctctttatgt cgcagatggc cgtgttgtct  
ttgctttggg  
4381 ggcaggaggg aagaaactga gactcaggag caaggagaga taccatgacg  
ggaagtggca  
4441 cacggtggtg ttcggactaa atggaggaaa ggcacgcctg gttgtggatg  
ggctaagggc  
4501 ccaggaaggc agtttgctg gaaattctac catcagcccc agagaacagg  
tttacctagg  
4561 gttgccgcta tcaagaaagc caaagagcct accccagcac agttttgtgg  
ggtgcctgag  
4621 agatttccag ttgaactcga aaccctgga ttctccttct gcgagggttg  
gggtatctcc  
4681 ctgcttggtt ggctctttag agaaaggcat ttatttctcc caaggaggag  
gccatgtgat  
4741 cctagccaat tctgtgtcct tggggccaga gcttaagctc actttcagca  
ttcgcccacg  
4801 gagtctcact ggggtcttaa tacacgtcgg aagtcaatct ggacagcgct  
taagtgtgta  
4861 catggaggca ggaaaggta caacctctgt gagcagtgat gcaggaggaa  
gtgtgacatc  
4921 aattacaccg aagcagtctc tgtgtgatgg acagtggcac tcggtggcag  
tctccattaa  
4981 acagcgcac ctgcatctag aactggatac agacagtagc tacacagtgc  
caccacttcc  
5041 cttctcaeca aacagcacc gagggctact gcacgtcgga ggtgtcccag  
acaaattgaa

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Fig. 2G2

FIG. 2G (CONT)

5101 aatgcttaca ctccctgtgt ggaactcatt ttttggtgt ctgaagaata  
 ttcaagtcaa  
 5161 ccatgtccct gtcccatca cagaagccac agaagtccaa ggttctgtca  
 gcctgaatgg  
 5221 ctgccctgac cactaaccct acacagcaag attcaccttt ggag

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 FIG. 2G-2

FIG. 2G-2

FIG. 2H

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MPPTVRWSAWCTGWLWIFGAALGQCLGYGSEQQRVAFLOHPGQN

HLQASYMELRPSQGCRPGYYRDIKSFPAGRSVPCNCNGHSNRCQDGSVCINCQHNTA  
 GEHCERCKRGYYGSAIHGSCRVCPCPHTNSFATGCAVDGGAVRCACKPGYTGAQCERC  
 APGYFGNPQKFGGSCQPCNCNSNGQFGTCDPLTGDCVSQEPKDGSPAEECDDCDSCVM  
 TLLNDLVPMBEELALVKSLLQGLSVNTGSLEQIRHVEMQAKDLRNQLLGFRSAISSHG  
 SQMDGLEKELSHLYQEFETLQEKAQVNSRKAQTLNNIDTTIQNAKELDMKIKNILT  
 VHILLKQIARPGGEGMDLPVGDWSRESAEARMLRELGRDFKKHLQEAEAKMEAQL  
 LLNRIRTWLESHQVENNGLLKNIRDSLNDYEAKLQDLRSVLQEAAAQKGKQATGLNHEN  
 EGVLGAIQRQMKEMDSLKKYLTEHLATADASLLQTNSSLQRMDSQKEYESLAAALNG  
 ARQELNDQVRELSRSGGKAPLVAEAEKHAQSLQELAKQLEEIKRNTSGDESVRCVDA  
 ATAYESIILNAIRAAEDAAGKADSASESAFQTVIKEDLPRRAKTLSSDSEELLNEAKMT  
 RKRLQQEINPALNSLQQTLKTVSVQKDLLDANVTAVRNDLRGIQRGDIDSVVSGAKSM  
 VRKANGITSEVLDGLSPIQTDLGRIKDSYGSTRHEDFNKALIDANNSVKKLTKKLPDL  
 FVKIESINQQLPLGNI SDNVDRIRELITQARDAANKVAIPMRFNKGSGVEVRLPNDL  
 EDLKGYSLSLFLQRPDLRENGGTEDMFVYMLGNKDASKDYIGMAVVDGQLTCVYNLG  
 DREAQVQIDQVLTESESQEAVM DRVKFQRIYQFAKLN YTK EATS NKPKAPAVYDLEGG  
 SSNTLLNLDPEDAVFYVGGYPPDFELPSRLRFPYKGCIELDDL NENVLSLYNFKTTF  
 NLNTTEVEPCRRRKEESDKNYFEGTGYARIPTQPNAPFPNFIQTIQTTVDRGLLFFAE

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 FIG. 2H

~~FIG. 2H~~ (CONT)

NQDNFISLNIEDGNLMVRYKLNSEPPKEKGIRDTINDGKDHSILITIGKLQKRMWINV  
NERSVRIEGEIFDFSTYYLGGIPIAIRERFNISTPAFQGCMKNLKKTSQVVRNLNDTVG  
VTKKCSWDKLVRTASFSRGGQMSFTNLDVPSTDRFQLSFGFQTFQPSGTLNLHQTRT  
SSLLVTLLEDGHIELSTRDSNIPFKSPGTMDGLLHHVSVISDTSGLRLLIDDQVLRR  
NQRLPSFSNAQQSLRLGGGHFEGCISNVLVQRFSSQPEVLDLASKSTKKDASLGGCSL  
NKPPFLMLFKSPKRFNKGRI FNVNQLMQDAPQATRSTEAWQDGRSCLPPLNTKASHRA  
LQFGDSPTSHLLLKLPQELLKPRSQFSLDIQTTSPKGLVFIYAGTKDSFLALYVADGRV  
VFALGAGGKKLRLRSKERYHDGKWHTVVFGNLGGKARLVVDGLRAQEGSLPGNSTISP  
REQVYLGLPLSRKPKSLPQHSFVGCLRDFQLNSKPLDSPSARFGVSPCLGGSLEKGIY  
FSQGGGHVILANSVSLGPELKLTF SIRPRSLTGVLHVGSQSGQRLSVYMEAGKVTTTS  
VSSDAGGSVTSITPKQSLCDGQWHSVAVSIKQRILHLELDTDSSYTVAPLSFSPNSTR  
GSLHVGGVPDKLKMLTLPVWNSFFGCLKNIQVNHVPVPITEATEVQGSVSLNGCPDH

FIG. 2H

~~FIG. 2I~~

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FIG. 2H

1 atgtcagagg gcatttgctg ccgagctggc gcactgtgca agagtggaca  
gcaagtttcc  
61 actgtggtgg tggtagatcc accaaaccat gccagtggaa tgagaactga  
atgcagccca  
121 ccagagcacg tgcacacgtg cattaaggaa cctcagaatc agctcttcca  
tgtggcttat  
181 atcttaatca aatttgcaaa ctctccccgc cctgatcttt ggatcctgga  
aagatctgta  
241 gacttttgaa gcacctactc accatggcag tatttttgctc attctagaag  
agattgtgta  
301 gaacagtttg ggcaagaagc aaacatggca attacccagg acgaccagat  
gctctgtgct  
361 acggagtatt cccgtatcgt gcctctggaa aatggcgaga ttgttgatc  
cttgataaat  
421 ggtcgtccag gtgcaaaaaa gtttgctttc tctgacactc tgagggagtt  
tactaaggca

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FIG. 2I-1



~~FIG. 2I (CONT)~~

481 acaaacatcc gcttgcggtt tctgcgaacc aacaccctcc tcgggcatct  
tattttccaag  
541 gcagagcgag accccactgt cacgcgccgg tattattgca tggaagctga  
tgatgctctg  
601 ttctctgtcc tgcagtatta ttacagcata aaggatatca gtgttggtgg  
gcggtgtggt  
661 tgcaacggcc atgcggaggc gtgcagtgtc gacaaccctg aaaagcagtt  
ccgatgcgaa  
721 tgccagcacc atacctgtgg agacacgtgt aaccgctgct gtgcaggtta  
caatcagagg  
781 cgctggcagc ctgctgggtca ggagcagcac aatgagtgtg aagcctgcaa  
ctgccatggg  
841 catgctgtgg actgctacta tgaccagac gtggagcacc agcaggcgag  
cttgaacagc  
901 aaaggcgtct acgcagggtg aggggtctgc atcaactgtc agcacaacac  
tgcaggcgtg  
961 aactgtgaaa agtgtgcgaa gggttacttc cggccccatg gagttccggt  
ggatgcactg  
1021 catggatgca tcccttgcag ctgtgacca gaacgcgcag atgactgtga  
ccagggtc  
1081 ggccactgcc attgtaagcc aaatttctcc ggagactact gtgagacgtg  
tgcagatggg  
1141 tactataatt ttccattttg cttgagaatt ccagtctttc ccaactacac  
tccaagtcca  
1201 gaagatccag tggctggcaa tataaaaggc aaggatccag ggactctaga  
cccaccagtc  
1261 atagcaaatg gggcatatct tggagcttca agactagagc aaggagccac  
aggccagggc  
1321 agccctgctg agagggtcac ccacaccaac tcatggctga gttcctcaat  
gcctatgctc  
1381 caggttaggg ctgccatcca tgaggctaag tgttactctc tgtgtttctg  
tatgtatgtt  
1441 gagcacagtg ggactgtacc acctgctctg gggtcagggt atacagggga  
ctctgagcct  
1501 aaaacaggaa cccaggcaaa aagggggtgt gactgtaact tggaagggtg  
tctcccagag  
1561 atatgtgacg atcgtggcag gtgcctgtgc cggcctgggg ttgagggtcc  
ccagtgtgac  
1621 tcttgccgct cgggtccta ttcatttccc atatgccaag cttgccagt  
ttcgacgatt  
1681 ggatcctatc cagtgcctg tgaccgggg aatggccagt gtgactgcct  
gcctggaatt  
1741 accgggaggc agtgtgacag gtgtctctcg ggagcctatg actttccata  
ctgccaaggt

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FIG. 2I-1

~~FIG. 2I (CONT)~~

1801 aaggaagccg gcagcatggt ggaggctcgg tctcatctg agtgggtgca  
gctgacctct  
1861 tggagaagcc tgggttattg tcagtgaag cagcatgttg caagtcctac  
atgtagtgtc  
1921 tgcaaaccat tatattggaa tctggccaaa gaaaaccccc gtggatgtc  
agagtgccag  
1981 tgccatgaag cagggacatt gagtggaatt ggagagtgtg ggcaggagga  
cggtgactgt  
2041 agctgcaaag cccatgtaac tggatgagcc tgcgacacct gtgaagatgg  
gtttttctct  
2101 ttggagaaga gcaattactt tggctgtcaa ggggtgtcagt gtgacattgg  
tggagcactc  
2161 accaccatgt gtagtgggcc ctccggagta tgccagtga gagagcacgt  
ggaggggaaa  
2221 cagtgccaga ggcctgaaaa taactactac ttcccgatt tgcaccacat  
gaagtatgag  
2281 gtcgaagatg gcaactggacc taatggaaga aacctgcggt ttggatttga  
tcccctggta  
2341 ttccctgagt ttagctggag aggatatgct ccaatgacct cagtccaggt  
atatatgagt  
2401 gagtgtgtgt gtcctctaca ctgcatgtta ttttggggta cttttcagaa  
tgaagtaagg  
2461 gtgagattgt ctgtgaggca gtccagcctc tcttgttcc gcacgttct  
gagatacatc  
2521 agtcctggaa cggaagccat atccggccga atcactctt actcatcgca  
gggagattcg  
2581 gatgctttgc aaagcagaaa aatcacctt ccccgagta aagagccagc  
ctttgtcaca  
2641 gtccctggga atggctttgc aggccattc tccatcacac ctgggacgtg  
gattgcttgc  
2701 atccaggtgg aaggagtct tctggactac ctggtgctgc ttcccaggga  
ctactatgaa  
2761 gcattcacc c tgcaagtgcc agtcacagag ccatgtgcc acacaggatc  
tcccaggac  
2821 aactgtttgc tttaccagca tttaccactg actgcattct cctgtaccct  
ggcttgtgag  
2881 gccagacact tctgctgga tggagagctg agacccttgg caatgaggca  
gccacaccc  
2941 acacacccag ccatggtgga cctcagcggg agagaggtag aactgcagct  
tcgtctgcgg  
3001 gtcccacagg ttggccacta cgtggtcctg ctggagtatg ccacggaggt  
ggagcagctt  
3061 tttgtggtgg acgtgaatct gaagagctca gggctgcct tggcaggcca  
ggtgaacata

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FIG.-2I-1

FIG. 2I-1  
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FIG.-2I-2

~~FIG. 2I~~ (CONT)

3121 tacagctgca agtacagcat cccgtgcagg agtgtggtga ttgacagcct  
gagtgcgacg  
3181 gctgtacatg agctgttggc agatgcagac attcagctca aggcgcacat  
ggcccatctt  
3241 cttttgtatc acatttgtat tataccagct gaagaattct caactgaata  
tttgagacct  
3301 caagtccact gcattgccag ctacaggcag catgctaate caagtgttc  
ctgtgtctcc  
3361 ctggcccatg aaactcctcc aacagcctca attttggatg ctacaagtag  
gggccttttc  
3421 tctgccttac ctcatgagcc ttctctctct gcagatggag ttactctgaa  
ggcaccacag  
3481 agtcaagtga ccctgaaagg actcatacca cacctgggccc gacacgtctt  
tgtcatccat  
3541 ttttatcaag cagagcacc agggtttccc actgaggtga ttgtgaatgg  
aggaagacag  
3601 tggtcagggt ccttccttgc ctctctctgt cccacttac ttggctgccg  
ggaccagggt  
3661 atctctgatg gccaaagtga gtttgacatc tctgaagcag aggtagctgt  
gacagtgaag  
3721 attccagatg gaaagtcctt aacattgggtc cgggttctag tggtagctgc  
agagaattac  
3781 gactacaaa ttcttcacaa aacaacagt gacaagtcct ccgagttcat  
cagcagttgt  
3841 ggaggagaca gcttttatat tgatccccag gcagcctctg gattctgtaa  
gaattctgca  
3901 aggtccctgg tagcctttta ccataacggt gccataacct gtgagtgcga  
ccctgctggg  
3961 actgccggcc accactgtag tcctgagggt gggcagtgcc cttgccggcc  
caatgtcatc  
4021 gggaggcagt gcagccgctg tgcgacaggc tactatggat tcccatactg  
caagccttgt  
4081 aattgtggca gacgcctttg tgaagagggt acagggaagt gtctctgccc  
acccacaca  
4141 gtcaggcctc agtgtgaggt ctgtgagatg aattccttca actttcaccc  
tgtggctggc  
4201 tgtgacgtct gcaactgctc caggaagggc accattgagg cggccgtctc  
tgagtgtgac  
4261 agggacagcg ggcagtgcag gtgcaagcct agagtcacag ggcagcagt  
tgacaagtgt  
4321 gctcctggct tctaccagtt ccctgagtgt gtcccctgca gctgtaacag  
agatgggact  
4381 gagcccagcg tatgtgaccc agagactggg gcttgcatgt gcaaggaaaa  
tgtagagggc

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FIG. 2I-2

~~FIG. 2I (CONT)~~

4441 ccccaatgtc aactgtgtcg agaaggatca ttctacctgg acccaacaaa  
cccaaagggg  
4501 tgtaccaagt gcttctgttt tggagtgaat actgactgtc agagttcgca  
taagcaacga  
4561 gctaagtttg tagacatgat gggctggcgt ctggagacag cagatggagt  
tgatgtccct  
4621 gtgtccttca accctggcag caacagcatg gtggcagatc tgcaggagct  
gccaccctca  
4681 gttcacagtg catcctgggt ggcacctcca tcctacctag gtgataaggt  
atcatcgtac  
4741 ggcggctacc tcacctacca cgccaagtcc tttggcttac ctggagatat  
ggttcttctg  
4801 ggaaagcagc cagatgtgca gctcactggg caacacatgt ccctcatcca  
taaggaaccc  
4861 agcgaccac gccagacag gctgcatcac ggaagagtgc aagtgattga  
gggaaacttc  
4921 agacacgaag gcagcagtgc cccagtgtcc cgggaggagc tgatgactgt  
gctgtccaga  
4981 ctggaaagac tccacatccg gggcctccat ttcaccgaga cacagcggct  
caccttgggt  
5041 gaggtagggc tggaggaggc ctctgacacg ggaagcggac ccaggggtca  
tcttgaggag  
5101 atgtgtgctt gccccctga ctacacaggt gactcatgcc agggttgtcg  
ccctggatac  
5161 tattgggaca aaaaagctt acctgtagga aggtgtgttc cctgcaattg  
caacggacat  
5221 tcaaatagat gccaggatgg ctccgggata tgcattaact gtcagcacia  
cacagctggg  
5281 gagcactgtg agcgttgcca agcaggtcac tatggaaatg ccatccacgg  
atcttgtagg  
5341 gtctgcccct gccctcatal caacagtttt gccaccggct gtgctgtgga  
tggtggagct  
5401 gtgaggtgtg cctgcaaacc cggatacaca ggaacacagt gtgagaggtg  
tgcaccagga  
5461 tattttggga acccccagaa atttgagggt agctgccagc catgcaattg  
taacagcaat  
5521 ggccagttag gtccttgca cccctaact ggagactgtg taaaccaaga  
acccaaagat  
5581 ggcagccctg cagaagaatg tgatgactgc gacagctgtg tgatgacgct  
cttaaatac  
5641 ttggcctcca tgggtgagga actccgcctg gtgaagtcaa agctgcaggg  
gctgagtggt  
5701 agcacgggtg ctctggaaca gatccggcac atggagacgc aggccaagga  
cctgaggaac

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FIG. 2I-2

~~FIG. 2I~~ (CONT)

5761 cagctgcttg gcttccgttc tgccacctca agtcatgggt ccaaaatgga  
 tgacctggaa  
 5821 aaagagctga gtcatttgaa ccgggaattt gaaactctgc aagaaaaggc  
 acaggccaat  
 5881 tccagaaaag cacaacatt <sup>20/28</sup>atataacaac attgatcaga caatccaaag  
 tgccaaagaa  
 5941 ctggacatga agattaaaa catcgttcag aatgtgcaca ttctcctgaa  
 gcagatggcg  
 6001 aggccagggtg gagaaggcac ggacttgcca gtgggtgact ggtccagggg  
 gctggccgaa  
 6061 gctcaacgca tgatgcgaga cctgcgaagc cgagacttta aaaagcacct  
 ccaagaagca  
 6121 gaggccgaga aaatggaagc ccagctctta ctgcaccgga tcaggacctg  
 gctggaatcc  
 6181 caccagggtgg agaacaacgg actgctaaag aatattcggg actccttaaa  
 tgattatgaa  
 6241 gacaaacttc aggacctacg ttccatcctc caggaggcag ctgccaggc  
 aaagcaggcc  
 6301 actggcatca accatgaaa tgaggggggt ctcggagcca tccagagaca  
 aatgaaagaa  
 6361 atggattccc tgaagaatga cttcaccaag tacctggcca cagccgactc  
 ttccctgctg  
 6421 cagaccaaca atctactgca gcagatggac aaaagccaga aggaatatga  
 aagcttagct  
 6481 gctgctttaa atggagcaag acaggaactg agtgacagag tgcgagaact  
 gtccagatcg  
 6541 ggtggcaaag caccgctggt ggtggaggca gagaagcatg cacagtcttt  
 acaggagctg  
 6601 gcaaagcagc tggaagagat aaagagaaac accagcgggg atgagctggt  
 gcgttgctg  
 6661 gtggatgctg ccacggccta tgagaacatc ctcaatgcca tcagagcagc  
 agaggatgca  
 6721 gccagcaagg ccaccagtgc ctccaagtct gccttccaaa cagtataaa  
 ggaagacctt  
 6781 ccaaaaagag ctaagaccct gagttctgac agcgagggaac tgtaaataa  
 agccaagatg  
 6841 acacagaaaa ggctacagca agtcagtcca gctctcaaca gcctacaaca  
 aacctgaag  
 6901 actgtatcag ttcagaagga cctgctagat gccaacctca ctgttgcccc  
 tgatgatctt  
 6961 catgggatac agagagggtga tatcgacagt gtggatgatc gtgcaaagag  
 catggtcagg  
 7021 gaagccaacg gaataacaag cgaggctctg gacgggctca accccatcca  
 gacagatttg

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 FIG. 2I-2

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 FIG. 2I-3

~~FIG. 2I (CONT)~~

7081 ggaaggatta aggacagcta tgagagcgca cggcgtgaag acttcagcaa  
ggctctggtc  
7141 gatgccaata actcagtaaa gaaattaacc aggaagttgc ctgatctttt  
tatcaagatt  
7201 gaaagtatca accaacagtt gctgcccctg gggaacatct ctgacaatgt  
ggaccgaatc  
7261 cgagaactca ttcagcaggc cagagatgct gcaaacaagg tgggtattcc  
catttggtc  
7321 tag

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FIG. 2I-3

FIG. 2I-3

~~FIG. 2J~~

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MSEGICCRAGALCKSGQQVSTVVVVDPPNHASGMRTECSPPEHV  
HTCIKEPQNQLFHVAYILIKFANSRPDLWILERSVDFGSTYSPWQYFAHSRRDCVEQ  
FGQEANMAITQDDQMLCVTEYSRIVPLENGEIVVSLINGRPGAKKFAFSDTLREFTKA  
TNIRLRFLRTNTLLGHLISKAERDPTVTRRYCMEADDALFSVLQYYYSIKDISVGGR  
CVCNGHAEACSDNPEKQFRCECQHHTCGDTCNRCCAGYNQRRWQPAGQEQHNECEAC  
NCHGHA VDCYYPDVEHQASLNSKGVYAGGGVCINCQHNTAGVNCEKCAKGYFRPHG  
VPVDALHGCIPCSCDPERADDCDQSGHCHCKPNFSGDYCETCADGYYNFPFCLRIPV  
FPNYTPSPEDPVAGNIKGDPTLDPPVIANGAYLGASRLEQGATGQGSPAERVHTN  
SWLSSSMPLQVRAAIHEAKCYSLCFMYVEHSGTVPPALGSGYTG DSEPKTGTQAKR  
GCDCNLEGVLPEICDDRGRCLCRPGVEGPQCDSCRSGSYSFPICQACQCSTIGSY PVP  
CDPGNGQCDCLPGITGRQCDRCLSGAYDFPYCQGKEAGSMLEARSSSEWVQLTSWRSL  
GYCQCKQHVA SPTCSVCKPLYWNLAKENPRGCSECQCHEAGTL SGIGECGQEDGDCSC  
KAHVTGDACDTCEDGFFSLEKSNYFGCQGCQCDIGGALTTC SGPSGVCQCREHVEGK  
QCQRPENNYYPDLHMKYEVEDGTGPNGRNLRFGFDPLVFPEFSWRGYAPMTSVQVY  
MSECVCPLH CMLFWGTFQNEVRVRLSVRQSSLSLFRIVLRYISPGTEAISGRITLYSS  
QGDSDALQSRKITFPFSKEPAFVTVPGNGFAGPFSITPGTWIACIQVEGVLLDYL VLL

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FIG. 2J

~~FIG. 2J~~ (CONT)

PRDYIEAFTLQVPVTEPCAHTGSPQDNCLLYQHLPLTAFSCTLACEARHFLLDGELRP  
LAMRQPTPTHAMVDLSGREVELQLRLRVPQVGHYVVLLEYATEVEQLFVVDVNLKSS  
GSALAGQVNIYSCKYSIPCRSVVIDSLRSTAVHELLADADIQLKAHMAHFLLYHICII  
PAEEFSTEYLRPQVHCIAASYRQHANSASCVSLAHETPPTASILDATSRGLFSALPHE  
PSSPADGVTLKAPQSQVTLKGLIPHLGRHVFIHFYQAEHPGFPTEVIVNGGRQWSGS  
FLASFCPHLLGCRDQVISDGQVEFDISEAEVAVTVKIPDGKSLTLVRVLVPAENYDY  
QILHKT TVDKSSEFISSCGGDSFYIDPQAASGFCKNSARSLVAFYHNGAIPCECDPAG  
TAGHHCSPEGGQPCRPNVIGRQCSRCATGYYGFPYCKPCNCGRRLCEEVTGKCLCPP  
HTVRPQCEVCEMNSFNHFPVAGCDVCNCSRKGTIEAAVSECDRDSGQCRCKPRVTGQQ  
CDKCAPGFYQFPECVPCSCNRDGTSPVCDPETGACMCKENVEGPQCQLCREGSFYLD  
PTNPKGCTKCFCFGVNTDCQSSHKQRAKFVDMMGWRLETADGVDVPVSFNPGSNSMVA  
DLQELPPSVHSASWVAPPSYLGDKVSSYGGYLYHAKSFGLPGDMVLLGKQPDVQLTG  
QHMSLIHKEPSDPRPDLRHHGRVQVIEGNFRHEGSSAPVSREELMTVLSRLRLHIRG  
LHFTETQRLTLGEVGLLEEASDTGSGPRAHLVEMCACPPDYTGDSQGCRPGYYWDNKS  
LPVGRCVPCNCGHNSNRCQDGSIGICINCQHNTAGEHCERCQAGHYGNAIHGSCRVCPC  
PHTNSFATGCAVDGGAVRCACKPGYTGTQCERCAPGYFGNPQKFGGSCQPCNCNSNGQ  
LGPCDPLTGDCVNQEPKDGSPAEECDDCDSCVMTLLNDLASMGEELRLVKSKLQGLSV  
STGALEQIRHMETQAKDLRNQLLGFRSATSSHGSKMDDLEKELSHLNREFETLQEKAQ  
VNSRKAQTLNNIDQTIQSAKELDMKIKNIVQNVHILLKQMARPGGEGTDLPGDWSR  
ELAEAQRMMRDLRSRDFKKHLQEAEEAEKMEAQLLLHRI RTWLESHQVENNGLLKNIRD  
SLNDYEDKLQDLRSILQEAAAQAKQATGINHENEGVLGAIQRQMKEMDSLKNDFTKYL  
ATADSSLLQTNLLQQMDKSQKEYESLAAALNGARQELSDRVRELSRSGGKAPLVVEA

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FIG. 2J

~~FIG. 2J (CONT)~~

EKHAQSLQELAKQLEEIKRNTSGDELVRCAVDAATAYENILNAIRAAEDAASKATSAS  
KSAFQTVIKEDLPKRAKTLSSDSEELLNEAKMTQKRLQQVSPALNSLQOTLKT VSVQK  
DLLDANLTVARDDLHGIQRGDIDSVVIGAKSMVREANGITSEVLDGLNPIQTDLGRIK  
DSYESARREDFSKALVDANNSVKKLTRKLPDLFIKIESINQQLPLGNISDNVDRIRE  
LIQQARDAANKVGIPWL"

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FIG. 2J

FIG. 2J



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CSPLPKTQANHGAHQFGDIPTSHLLFKLPQELLKPRSQFAVDMQTTSSRGLVFHTGTKNSFMAL  
YLSKGRVLFALGTDGKKLRIKSKEKCNDGKWHTVVFGHDGEKGRVVDGLRAREGSLPGNSTIS  
IRAPVYLGSPSPSGPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFVSSCLGGPLEKGIYFSEEG  
GHVVLAHSVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHLVCVYLEAGKVTASMDSGAGGTSTS  
VTPKQSLCDGQWHSVAVTIKQHILHLELDTSSYTAGQIPFPFASTQEPLHLGGAPANLTTLRI  
PVWKSFFGCLRNIHVNIHVPVTEALEVQGPVSLNGCPDQ

FIG.-3A

t gctcaccact tcccaagacc caggccaatc atggagccct ccagtttggg  
gacattccca ccagccactt gctattcaag cttcctcagg agctgctgaa  
accaggtca cagtttgctg tggacatgca gacaacatcc tccagaggac  
tggtgtttca cacgggcact aagaactcct ttatggctct ttatctttca  
aaaggacgtc tggctcttgc actggggaca gatgggaaaa aattgaggat  
caaaagcaag gagaaatgca atgatgggaa atggcacacg gtgggtgtttg  
gccatgatgg ggaaaagggg cgcttggttg tggatggact gagggcccg  
gaggaagtt tgcctggaaa ctccaccatc agcatcagag cgccagttta  
cctgggatca cctccatcag ggaaaccaa gagcctcccc acaaacagct  
ttgtgggatg cctgaagaac tttcagctgg attcaaaacc cttgtatacc  
ccttcttcaa gcttcggggt gtcttctcgc ttgggtgggc ctttgagaa  
aggcatttat ttctctgaag aaggaggtca tgtcgtcttg gctcactctg  
tattgttggg gccagaattt aagcttggtt tcagcatccg cccaagaagt  
ctcactggga tcctaataca catcggaagt cagcccgga agcacttatg  
tgtttacctg gaggcaggaa aggtcacggc ctctatggac agtggggcag  
gtgggacctc aacgtcggtc acaccaaagc agtctctgtg tgatggacag  
tggcactcgg tggcagtcac cataaaacaa cacatcctgc acctggaact  
ggacacagac agtagctaca cagctggaca gatccccctc ccacctgcca  
gcactcaaga gccactacac cttggaggtg ctccagccaa tttgacgaca  
ctgaggatcc ctgtgtggaa atcattcttt ggctgtctga ggaatattca  
tgtcaatcac atccctgtcc ctgtcactga agccttgga gtccaggggc  
ctgtcagtct gaatggttgt cctgaccagt aaccaagcc tatttcacag  
caaggaaatt caccttcaa agcactgatt acccaatgca cctccctccc  
cagctcgaga tcattcttca attaggacac aaaccagaca ggtttaatag  
cgaatctaatt tttgaattct gaccatggat acccatcact ttggcattca  
gtgctacatg tgtattttat ataaaaatcc catttcttga agataaaaaa  
attgttattc aaattgttat gcacagaatg tttttggtaa tattaatttc  
cactaaaaaa ttaaatgtct

FIG.3B

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CLGGPLEKGIYFSEEGGHVVLAHSVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHLVCVYLEAG  
KVTASMDSGAGGTSTSVTPKQSLCDGQWHSVAVTIKQHILHLELDTSSYTAGQIPFPFASTQE  
PLHLGGAPANLTTLRIPVWKSFFGCLRNIHVNIHVPVTEALEVQGPVSLNGCPDQ

} on next page

FIG.\_3C

tgc ttgggtgggc ctttggagaa aggcatttat ttctctgaag aaggaggtca  
tgtcgtcttg gctcactctg tattgttggg gccagaattt aagcttgttt  
tcagcatccg cccaagaagt ctactggga tcctaataca catcggaagt  
cagcccggga agcacttatg tgtttacctg gaggcaggaa aggtcacggc  
ctctatggac agtggggcag gtgggacctc aacgtcggtc acaccaaagc  
agtctctgtg tgatggacag tggcactcgg tggcagtcac cataaaacaa  
cacatcctgc acctggaact ggacacagac agtagctaca cagctggaca  
gatccccttc ccacctgcca gcactcaaga gccactacac cttggaggtg  
ctccagccaa tttgacgaca ctgaggatcc ctgtgtggaa atcattcttt  
ggctgtctga ggaatattca tgtcaatcac atccctgtcc ctgtcactga  
agccttgga gtccaggggc ctgtcagctc gaatggttgt cctgaccagt  
aaccaagcc tatttcacag caaggaaatt caccttcaa agcactgatt  
acccaatgca cctccctccc cagctcgaga tcattcttca attaggacac  
aaaccagaca ggtttaatat cgaatctaatt tttgaattct gaccatggat  
acccatcact ttggcattca gtgctacatg tgtattttat ataaaaatcc  
catttcttga agataaaaaa attgttattc aaattgttat gcacagaatg  
tttttggtaa tattaatttc cactaaaaaa ttaaattgtc

FIG.\_3D

PLPKTQANHGA

FIG.\_3E

cact tcccaagacc caggccaatc atggagc

FIG.\_3F

SHLLFKLPQELLKPRS

FIG.\_3G

gccactt gctattcaag cttcctcagg agctgctgaa acccaggtca

FIG.\_3H

TSSRGLVFHTGKNSFMALYLSKGRLV<sup>24/28</sup>FALGTDGKKLRIKSKEKCNDGKWHTVVFGHDGEKGRL  
VVDGLRAREGSLPGNSTISIRAPVYLGSPSGKPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFG  
VSS

FIG.\_3I

} on next  
page

gacaacatcc tccagaggac tgggtgtttca cacggggcact aagaactcct  
 ttatggctct ttatctttca aaaggacgtc tgggtctttgc actgggggaca  
 gatgggaaaa aattgaggat caaaagcaag gagaaatgca atgatgggaa  
 atggcacacg gtggtgtttg gccatgatgg ggaaaagggg cgcttggttg  
 tggatggact gagggcccgg gaggggaagtt tgcctggaaa ctccaccatc  
 agcatcagag cgccagttta cctgggatca cctccatcag ggaaacccaa  
 gagcctcccc acaaacagct ttgtgggatg cctgaagaac tttcagctgg  
 attcaaaacc cttgtatacc ccttcttcaa gcttcggggg gtcttctc

FIG.\_3J

TSSRGLVFHTGTKNSFMALYLSKGRLVFALGTDGKKLRIKSKEKCNDGKWHTTVVFGHDGEKGRL  
 VVDGLRAREGSLPGNSTISIRAPVYLGSPPSGKPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFG  
 VSSCLGGPLEKGIYFSEEGGHVVLAHSVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHL CVYL  
 EAGKVTASMDSGAGGTSTSVTPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFPAS  
 TQEPLHLGGAPANLTTLRIPVWKSFFGCLRNIHVNIH PVPVTEALEVQGPVSLNGCPDQ

FIG.\_3K

catcc tccagaggac tgggtgtttca cacggggcact aagaactcct ttatggctct  
 ttatctttca aaaggacgtc tgggtctttgc actgggggaca gatgggaaaa  
 aattgaggat caaaagcaag gagaaatgca atgatgggaa atggcacacg  
 gtggtgtttg gccatgatgg ggaaaagggg cgcttggttg tggatggact  
 gagggcccgg gaggggaagtt tgcctggaaa ctccaccatc agcatcagag  
 cgccagttta cctgggatca cctccatcag ggaaacccaa gagcctcccc  
 acaaacagct ttgtgggatg cctgaagaac tttcagctgg attcaaaacc  
 cttgtatacc ccttcttcaa gcttcggggg gtcttctcgc ttgggtgggc  
 ctttgagaa aggcatttat ttctctgaag aaggagggtca tgcgtcttg  
 gctcactctg tattgttggg gccagaattt aagcttggtt tcagcatccg  
 cccaagaagt ctactggga tcctaataca catcggaagt cagcccggga  
 agcacttatg tgtttacctg gaggcaggaa aggtcacggc ctctatggac  
 agtggggcag gtgggacctc aacgtcgggc acaccaaagc agtctctgtg  
 tgatggacag tggcactcgg tggcagtcac cataaaacaa cacatcctgc  
 acctggaact ggacacagac agtagctaca cagctggaca gatccccctc  
 ccacctgcca gactcaaga gccactacac cttggagggtg ctccagccaa  
 tttgacgaca ctgaggatcc ctgtgtggaa atcattcttt ggctgtctga  
 ggaatattca tgtcaatcac atccctgtcc ctgtcactga agccttgga  
 gtccaggggc ctgtcagctc gaatggttg

FIG.\_3L

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FKLVFSIRPRSLTGILIHIGSQPGKHL CVYLEAGKVTASMDSGAGGTSTSVTPKQSLCDGQWHS  
 VAVTIKQHILHLELDTDSSYTAGQIPFPASTQEPLHLGGAPANLTTLRIPVWKSFFGCLRNIH  
 VNHI PVPVTEALEVQGPVSLNGCPDQ

FIG.\_3M

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 next  
 page

tt aagcttggtt tcagcatccg cccaagaagt ctactggga tctaataca  
catcggaagt cagcccgga agcacttatg tgtttacctg gaggcaggaa  
aggtcacggc ctctatggac agtggggcag gtgggacctc aacgtcggtc  
acaccaaagc agtctctgtg tgatggacag tggcactcgg tggcagtcac  
cataaaacaa cacatcctgc acctggaact ggacacagac agtagctaca  
cagctggaca gatccccttc ccacctgcca gcactcaaga gccactacac  
cttggagggtg ctccagccaa tttagcgaca ctgaggatcc ctgtgtggaa  
atcattcttt ggctgtctga ggaatattca tgtcaatcac atccctgtcc  
ctgtcactga agccttgga gtccaggggc ctgtcagtct gaatggttgt  
cctgaccagt

FIG. 3N

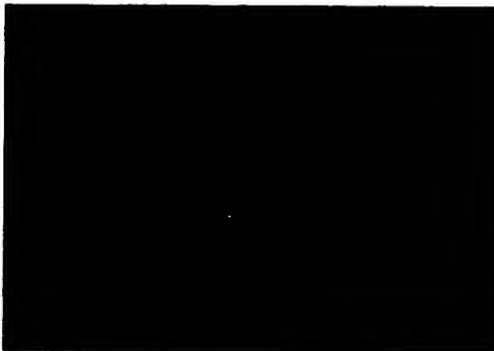
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~~FIG. 4~~

human  
skin



human  
SCC



mammalian Tolloid

laminin 5

FIG. 4

Figure is oriented as landscaped.

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~~FIG. 5~~

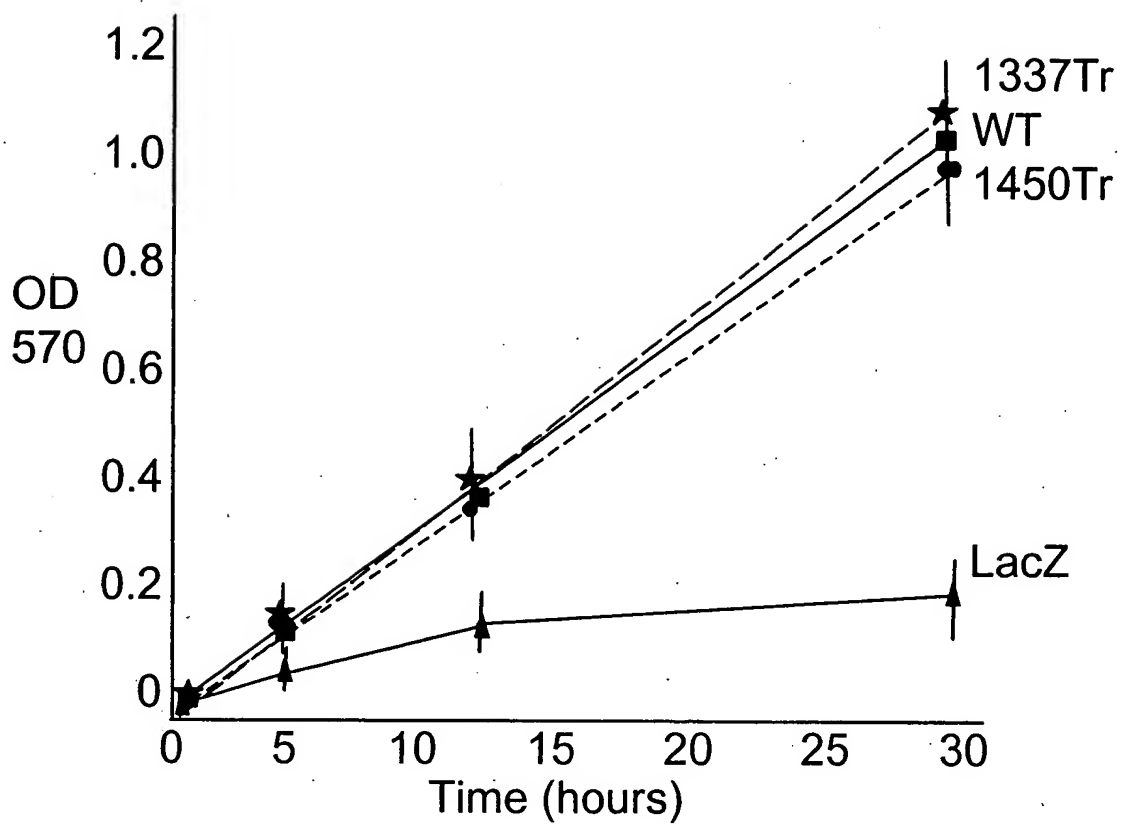


FIG. 5

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FIG. 6

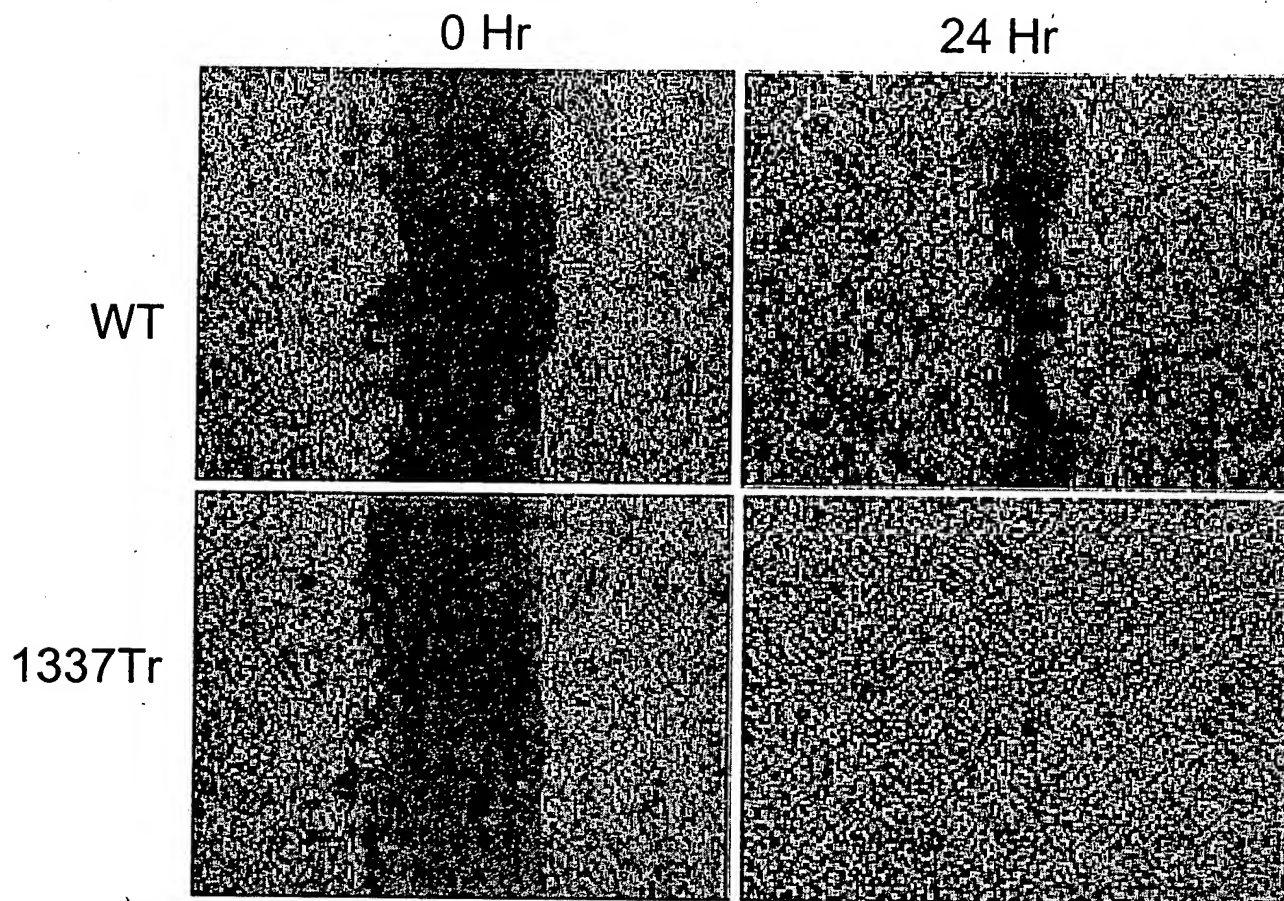


FIG. -6

FIG. -7 appears here

FIG. -7

~~FIG. 7~~

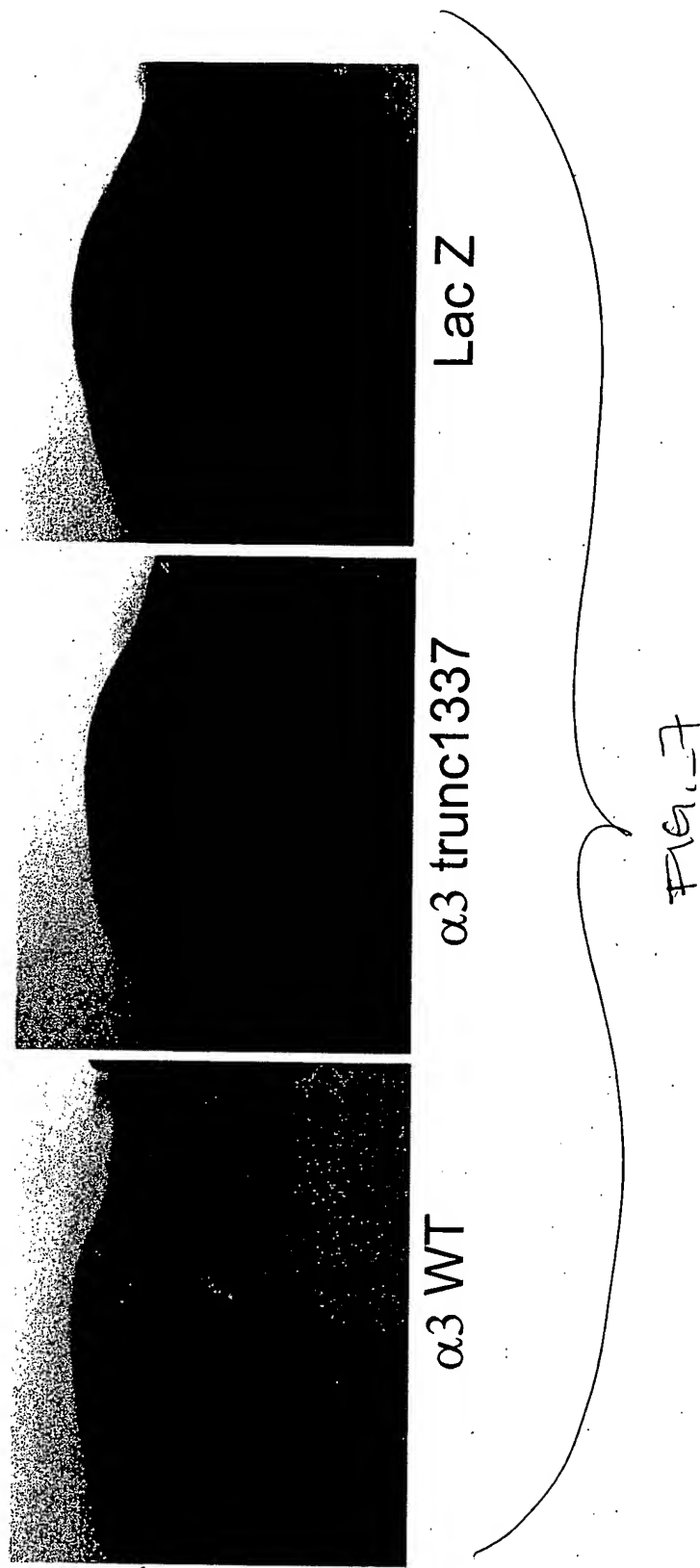


FIG. 7 now appears on same page as FIG. -b.



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